

**Little Lake Shoreline Protection & Marsh
Creation Project
BA-37**

SCI PROJECT NO. 131365

**FINAL SPRING 2008 POST CONSTRUCTION MONITORING
REPORT**



October 2008

**Prepared for:
Louisiana Department of Natural Resources**

Prepared By:
Shaw Coastal, Inc.
197 Elysian Drive
Houma, Louisiana 70363



SURVEY REPORT

TABLE OF CONTENTS

Section 1	Methodology Report.....	Page 1
Section 2	Drawing Files.....	Page 3
Section 3	Survey Data.....	Page 4
Section 4	Field Notes.....	Page 5

List of Appendices

- A Secondary Monument Data Sheet
- B Survey Report and Data (CD-ROM)
- C Land Surveyor's Certification

Section 1

Methodology Report

SECTION 1

METHODOLOGY REPORT

DESCRIPTION

This report details the procedures followed by Shaw Coastal Inc. (Shaw) to provide the Louisiana Department of Natural Resources, Coastal Restoration Division (LDNR/CRD) with required monitoring data to measure the elevation changes related to the marsh creation areas for the Little Lake Shoreline Protection/Dedicated Dredging Near Round Lake project (BA-37).

Services include an elevation survey along pre-determined transects to determine marsh elevations as well as surveying the elevation of the rock dike settlement plates.

LOCATION

The Little Lake Shoreline Protection and Marsh Creation (BA-37) is a shoreline protection and marsh creation project located in the central Barataria Basin in Lafourche Parish, Louisiana. The Little Lake Shoreline Protection and Marsh Creation project area is located on the southwestern shoreline of Little Lake from Superior Canal to Plume Point. The Little Lake project area is generally bound by the East and West Forks of Bayou L’Ours and the southern shoreline of Little Lake from Plum Point westward to Breton Canal.

The site is accessible only by boat. The nearest boat launch is the Clovelly Farms on Clovelly Canal located in Cut Off, Louisiana.

The purpose of the project is to prevent erosion along approximately four (4) miles of Little Lake shoreline; create 488 acres of intertidal wetlands along the Little Lake shoreline; nourish and maintain 532 acres of intermediate marsh; and reduce the land-loss rates by 50% over the 20-year life of the project. The project consists of constructing a shoreline protection rock dike in open water along the shoreline of Little Lake and using dredged material from Little Lake to create/nourish intertidal marsh along the Little Lake shoreline. The project is sponsored by the United States Department of Commerce / National Ocean and Atmospheric Administration (NOAA) National Marine Fisheries Services (NMFS) and the Louisiana Department of Natural Resources (LDNR) under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA).

PLANNING AND LAYOUT OF THE GPS SURVEY

This scope of services involves the completion of a topographic survey along predetermined transects inside the Little Lake project (BA-37). The survey will provide data used to calculate elevation changes within the marsh creation areas.

In addition, the tops of the 24 settlement plates installed along the rock dike alignment were surveyed.

TOPOGRAPHIC SURVEYS

The points were surveyed utilizing Real Time Kinematic (RTK) surveying techniques. This survey was referenced to the LDNR Louisiana Coastal Zone (LCZ) GPS Network. The LCZ Secondary Monument used as the GPS reference station for this project is the BA-37-SM-01 and BA-37-SM-02 monuments. The latest summary sheet showing the most recent adjusted position and elevation for these monuments are in Appendix A. The equipment that was used on this project was a Trimble 5700 RTK base station with a Trimble 5800 rover unit. The data was collected and stored on a Trimble TSCE data collector. The raw data from the data was processed in TGO (Trimble Geomatics Office) software with the project datum set to NAD 1983 (conus) and the geoid model set to GEOID99 (conus). All survey data was recorded in LSZ NAD 83 feet (coordinates) and NAVD 88 feet (elevations).

On a daily basis the RTK base station was setup over a previously established TBM. The base station used a fixed antennae height. The TBM was checked against the secondary monuments to confirm its elevation. Each day, the TBM and setup were checked against a secondary monument prior to gathering data and again immediately after. At the end of each day the data was downloaded and processed through TGO software. Once the survey data was downloaded into TGO and processed it was then exported to AutoDesk Land Development software.

Points were collected along predetermined transect lines at point locations as shown on the attached drawing (3 of 12), as well as on the top of each of the 24 settlement plates.

QUALITY ASSURANCE PROCEDURES

Two LDNR LCZ monuments (BA-37-SM-01 and BA-37-SM-02) were used for the surveys. These monuments were used as checks on a daily basis for RTK surveys.

TIMELINE OF SURVEY

Field surveys were conducted between 4/30/2008 and 5/9/2008 by Randy Peterson and Sal Billiot with the support of Matthew Sevier. Data was downloaded at the end of each field visit by Randy Peterson. The drawings and survey report were delivered by Susan Burgess from 6/2/2008 to 6/9/2008 under the supervision of Tyler Ortego, E.I. on 6/10/2008. The final report was reviewed and stamped by Henry Schwartz, P.L.S.

FIELD VERIFICATION

In response to concerns that some surveyed marsh elevations appeared to be higher than previously surveyed, a field day was scheduled with SCI surveyors and LDNR personnel to verify elevations. On July 24, 2008, Randy Peterson (Shaw) and Matthew Sevier (Shaw), along with Glen Curole (LDNR) revisited the site to verify selected elevations. The elevations were surveyed according to the same procedure described above. Survey data, field notes, and a summary drawing (Sheet 3a of 12) are included in this report.

Section 2

Drawing Files

SECTION 2

DRAWING FILES

Attached are twelve (12) drawing sheets created for the project area with all transects and elevation shots clearly labeled and plotted using the coordinates. On the plan view, the coordinate system that the drawing is referenced is the Louisiana State Plane Coordinates, South Zone, and the North American Datum of 1983 (NAD 83) in feet. Elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88) in feet.

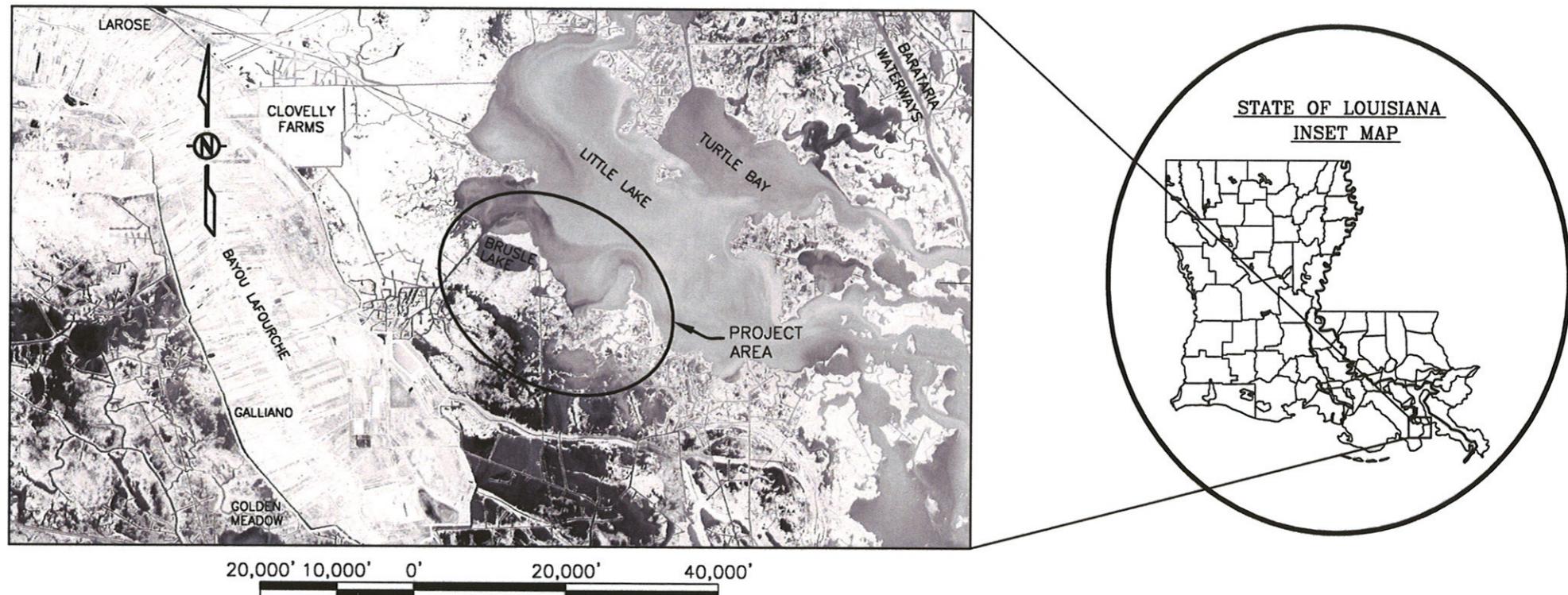
LITTLE LAKE SHORELINE PROTECTION AND MARSH CREATION

BA-37

LAFOURCHE PARISH

INDEX TO SHEETS

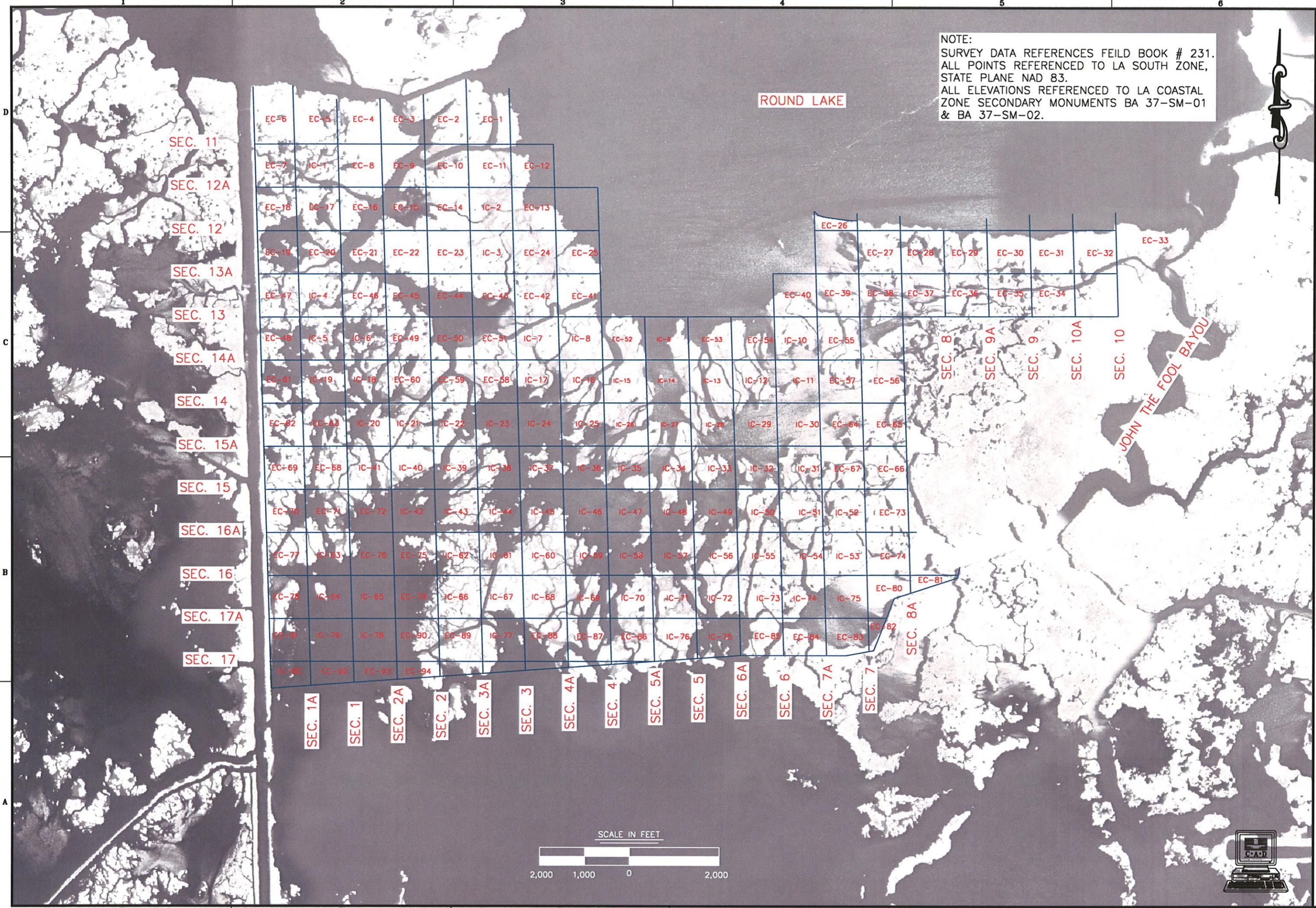
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	MARSH TRANSECT PLAN VIEW
3	PRE-CONSTRUCTION, AS-BUILT & POST CONSTRUCTION SURVEYS
4-11	CROSS SECTIONS
12	SETTLEMENT PLATE ELEVATION SURVEY



SPRING 2008 POST CONSTRUCTION MONITORING REPORT
OCTOBER 2008



NOTE:
SURVEY DATA REFERENCES FEILD BOOK # 231.
ALL POINTS REFERENCED TO LA SOUTH ZONE,
STATE PLANE NAD 83.
ALL ELEVATIONS REFERENCED TO LA COASTAL
ZONE SECONDARY MONUMENTS BA 37-SM-01
& BA 37-SM-02.



WORK	DESCRIPTION	DATE APPROV.

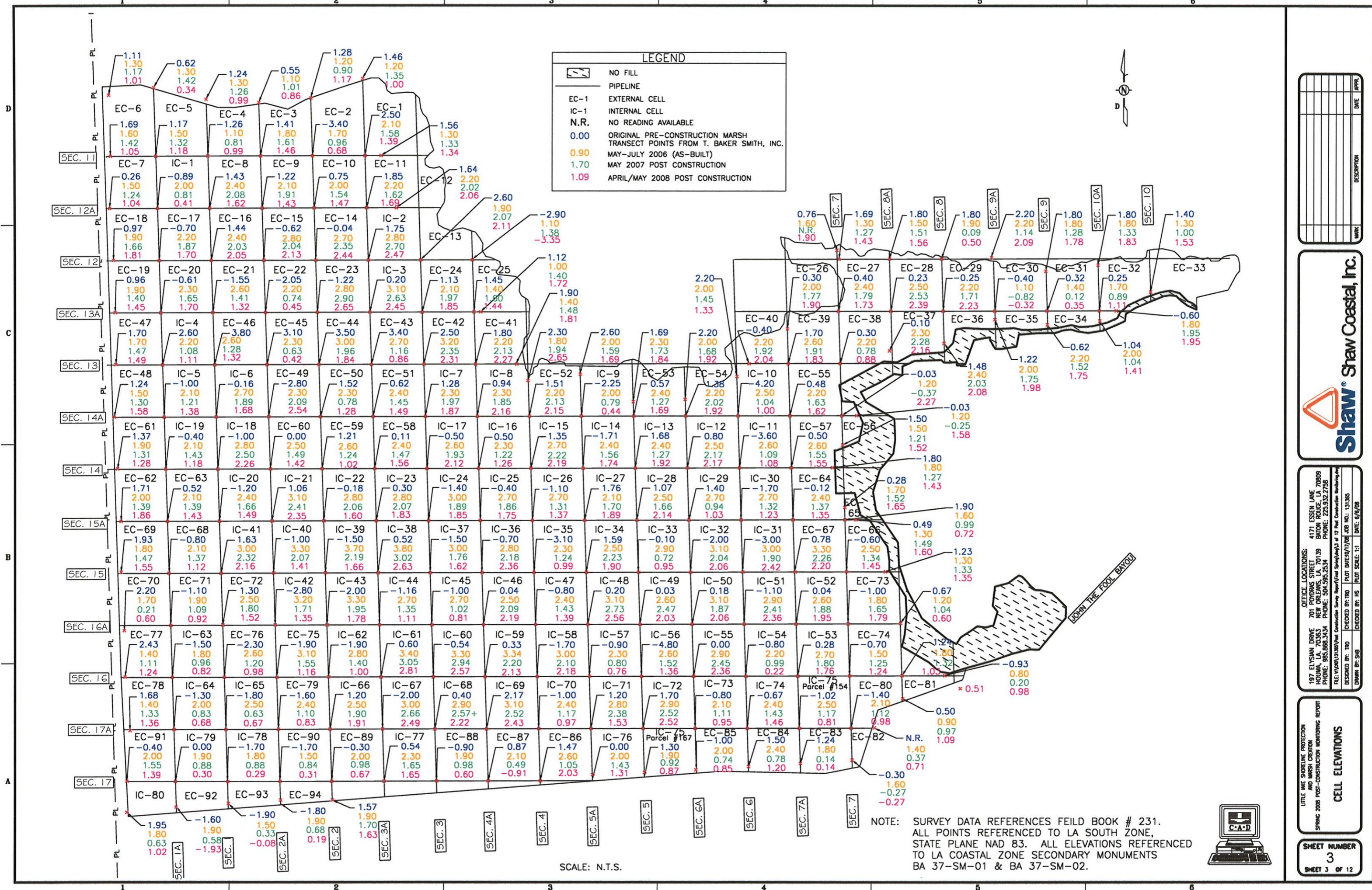


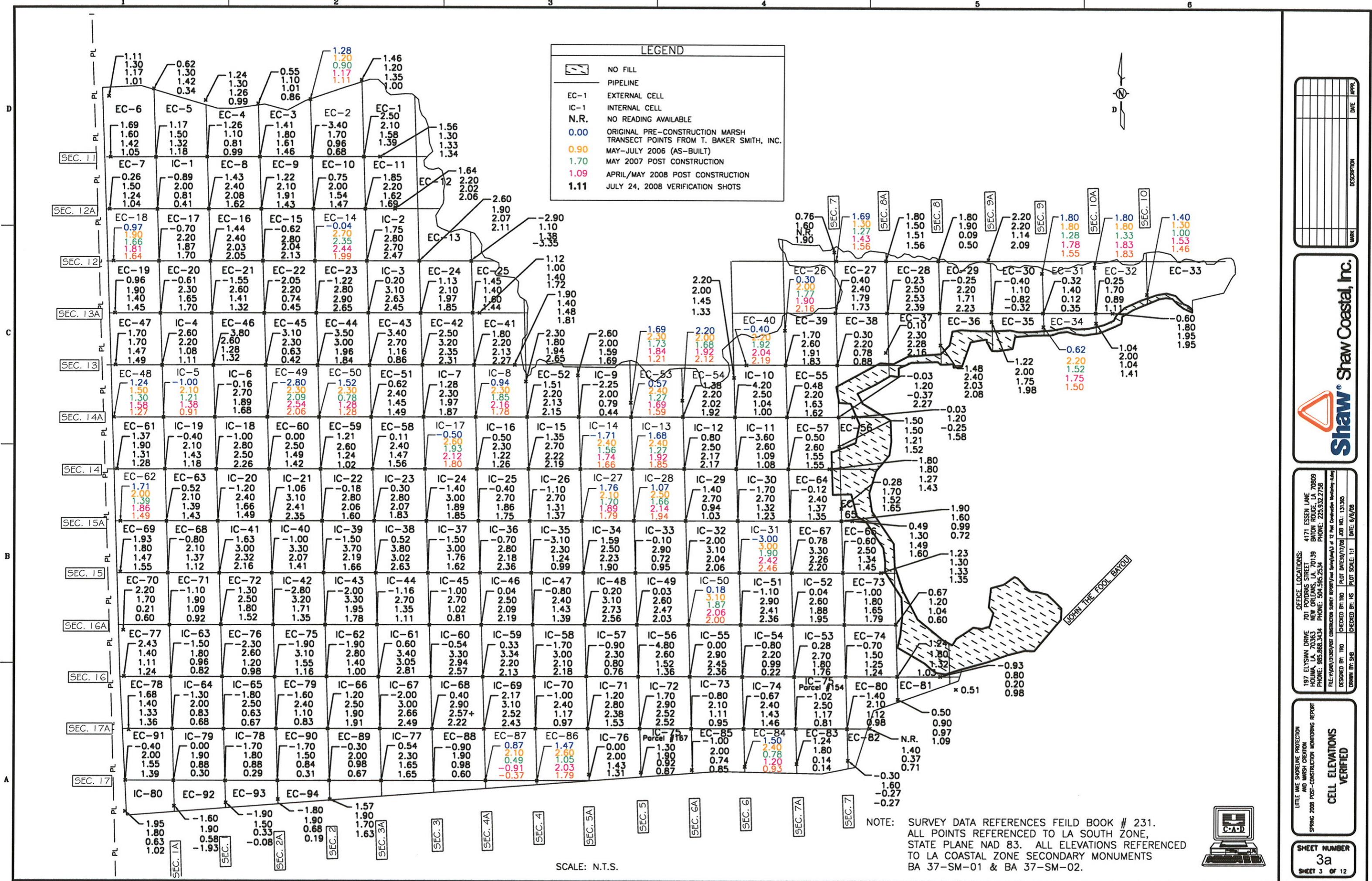
197 ELYSIAN DRIVE	701 PUYDRAS STREET	4171 ESSEN LANE	BATON ROUGE, LA 70809
HOUMA, LA 70363	NEW ORLEANS, LA 70139	PHONE: 504.395.2534	PHONE: 225.932.2758
FILE: HYDRO13 SURVEYOR SURVEY REPORT/12' x 12' MESH TRANSECT PLAN	FILE: HYDRO13 SURVEYOR SURVEY REPORT/12' x 12' MESH TRANSECT PLAN	FILE: HYDRO13 SURVEYOR SURVEY REPORT/12' x 12' MESH TRANSECT PLAN	FILE: HYDRO13 SURVEYOR SURVEY REPORT/12' x 12' MESH TRANSECT PLAN
DESIGNED BY: TBO	CHECKED BY: NS	PLOT DATE: 10/17/08	JOB NO.: 131305
DRAWN BY: SHB	CHECKED BY: NS	PLOT SCALE: 1:1	DATE: 6/6/08

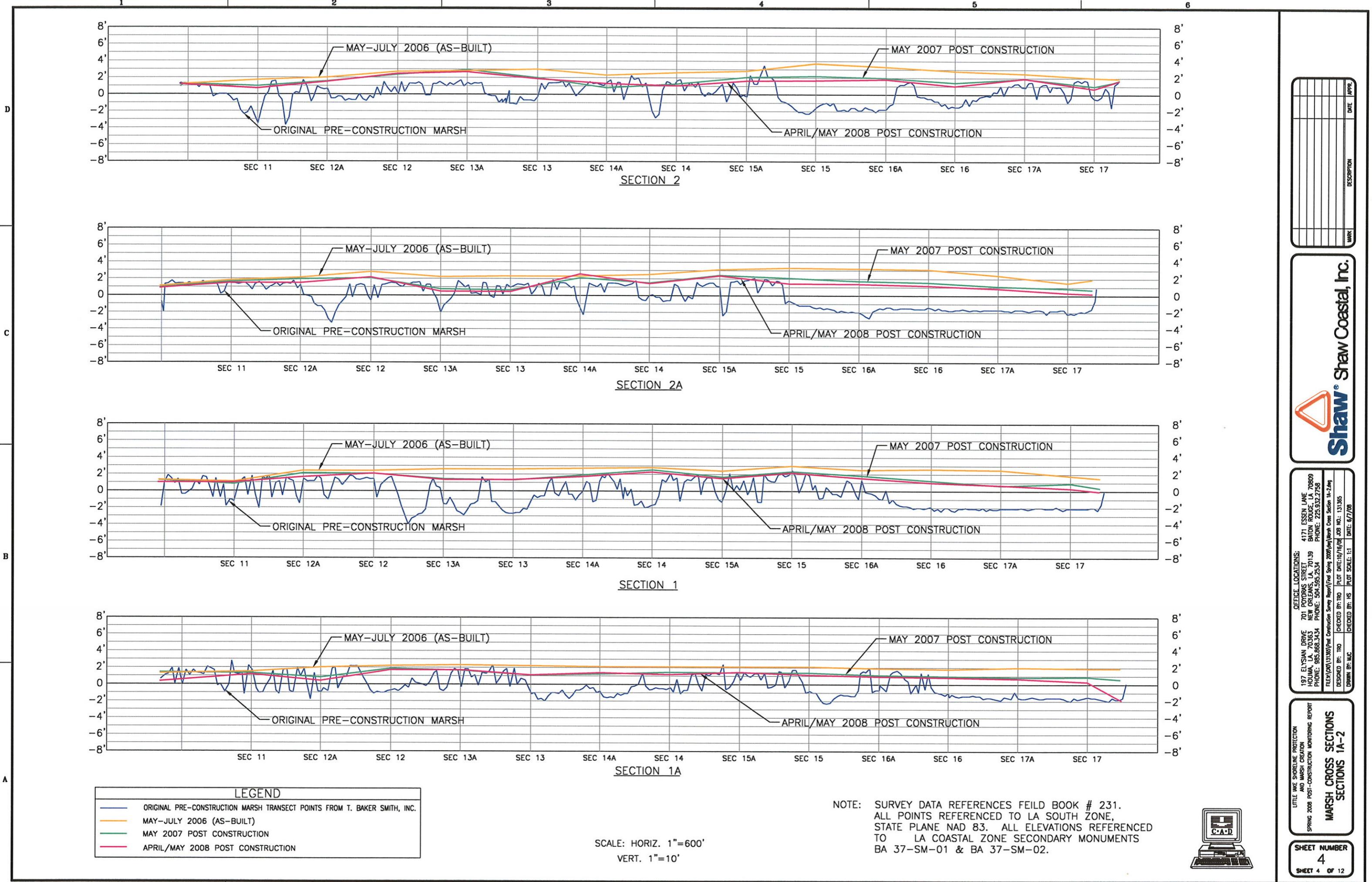
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MARSH TRANSECT PLAN VIEW	

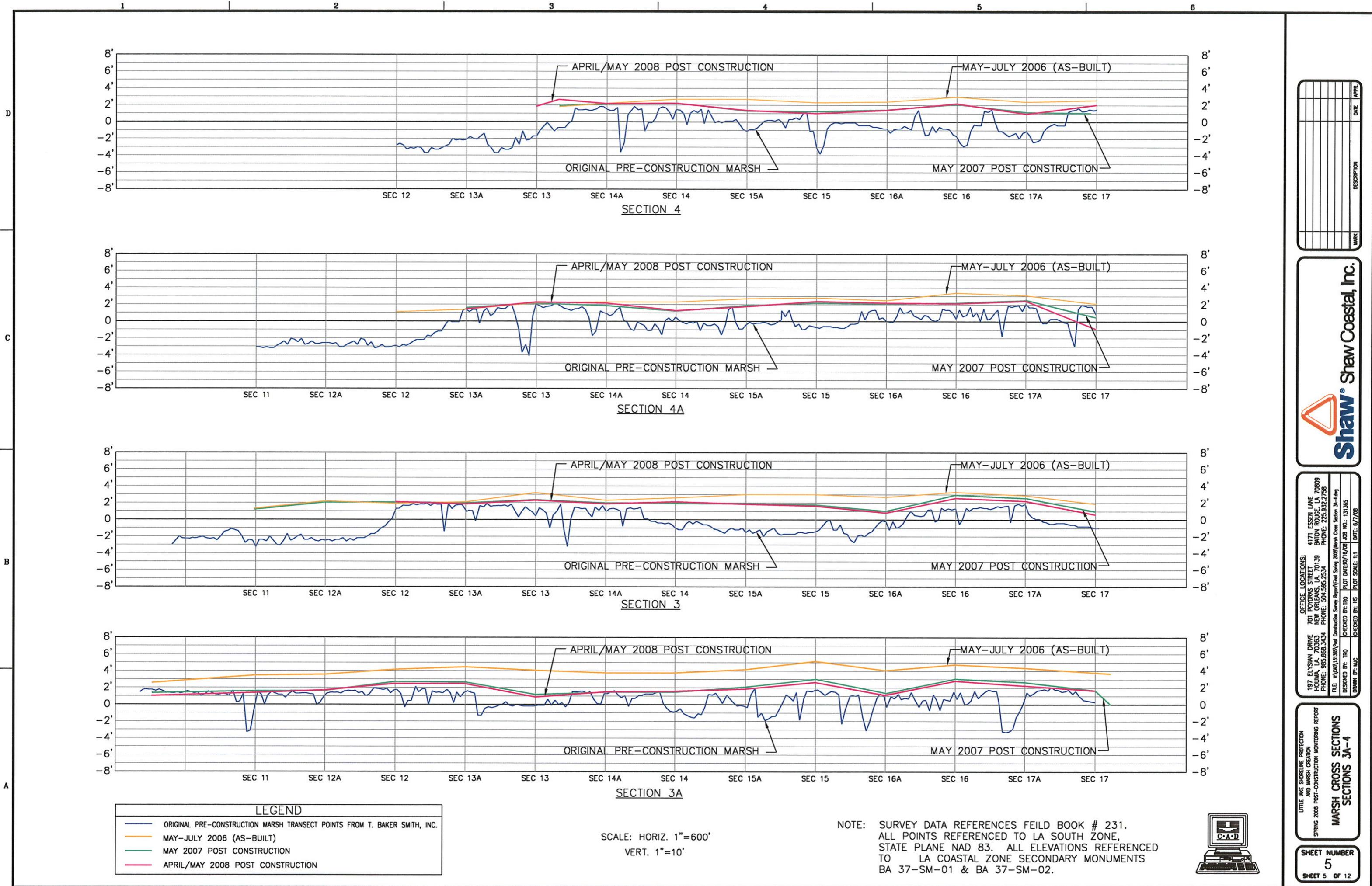
SHEET NUMBER 2 SHEET 2 OF 12

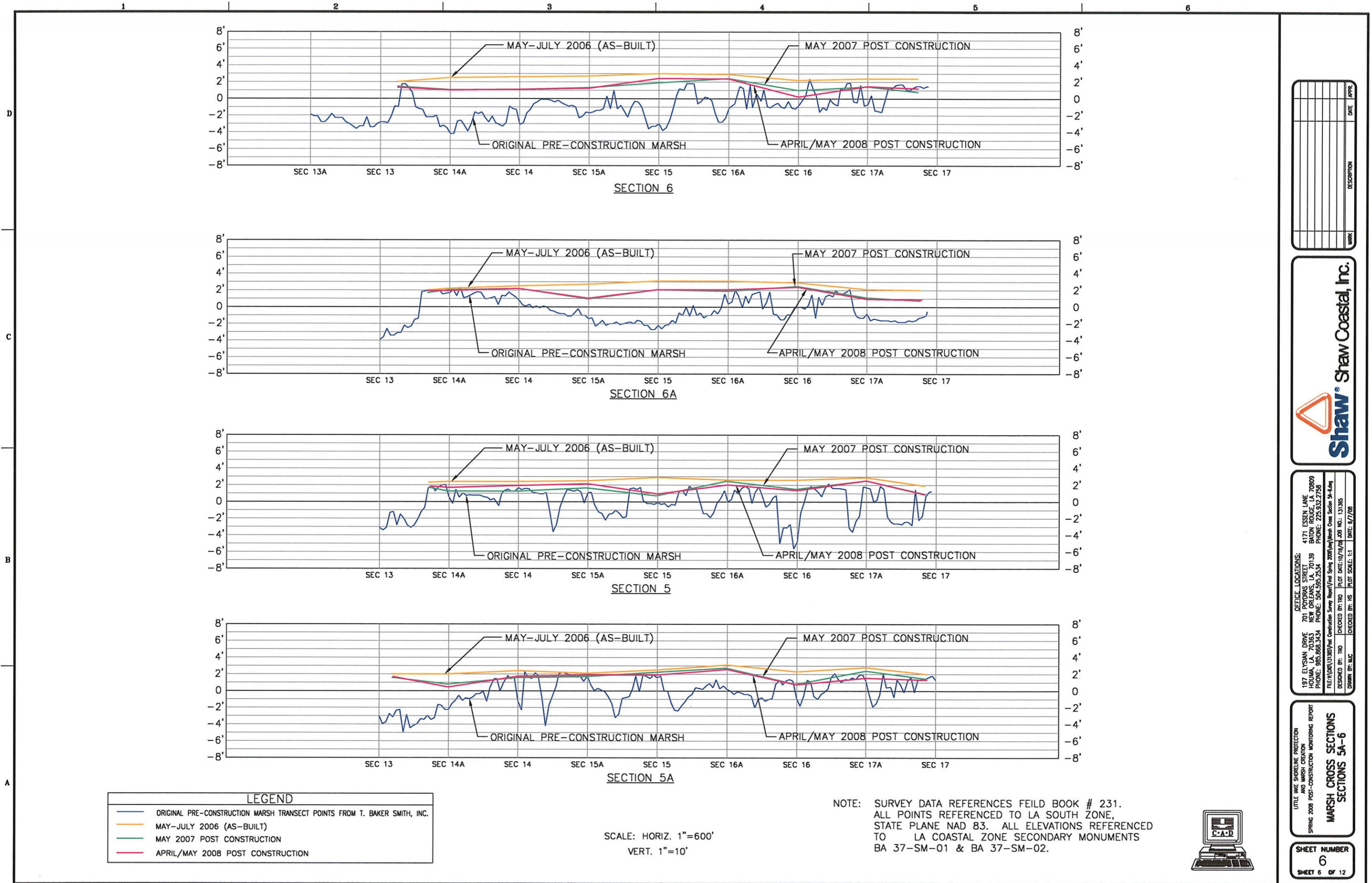


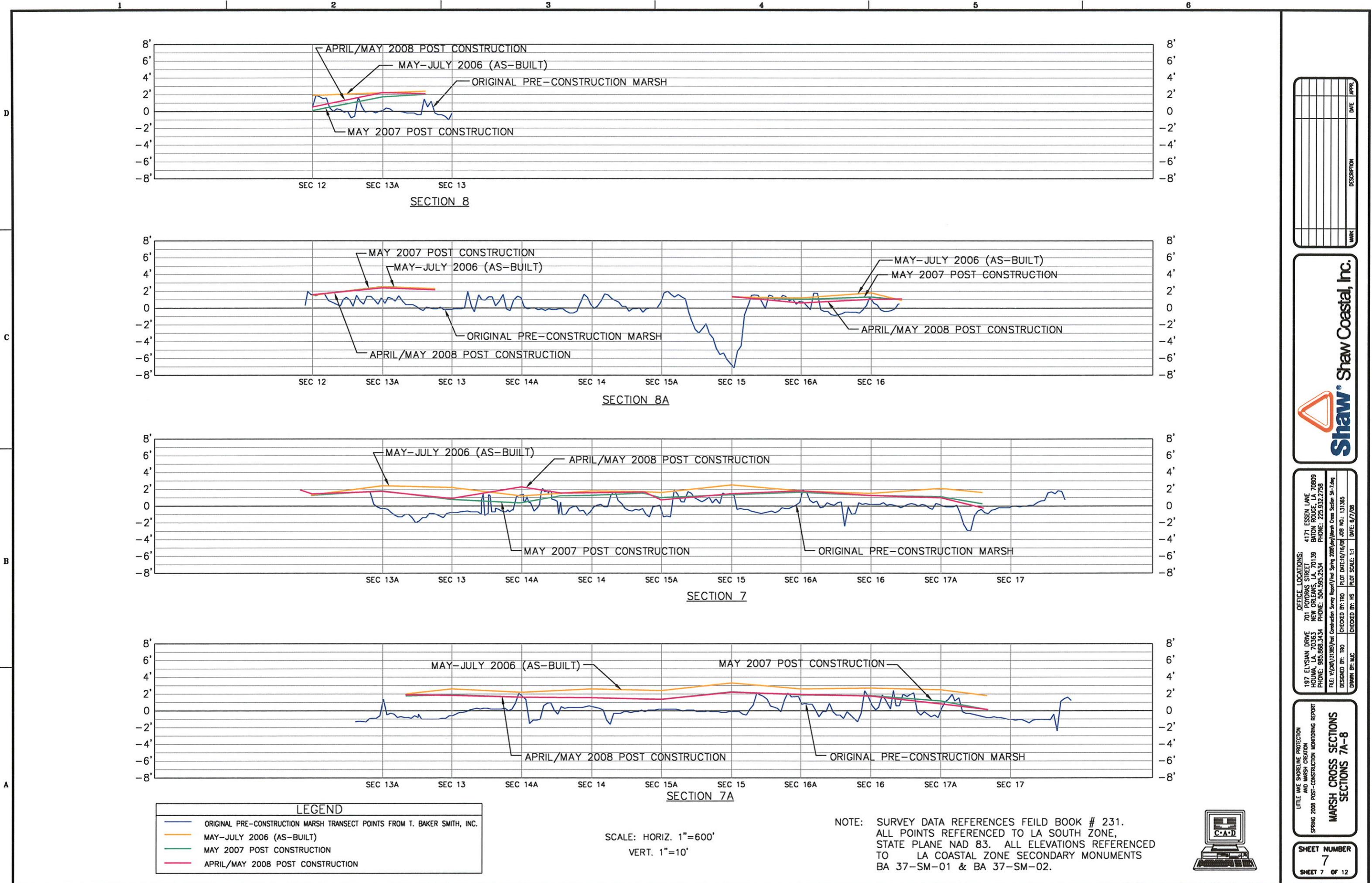




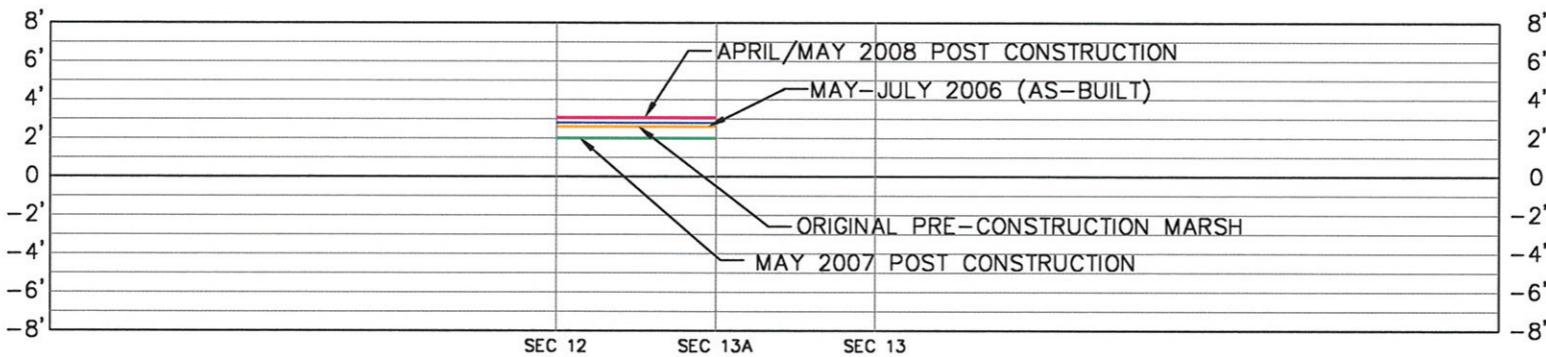




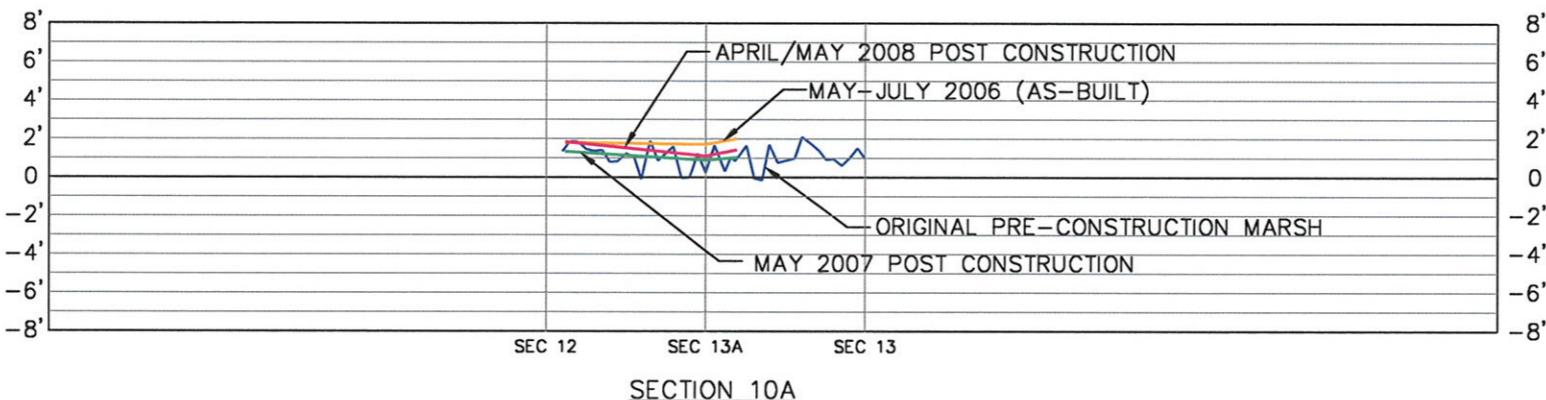




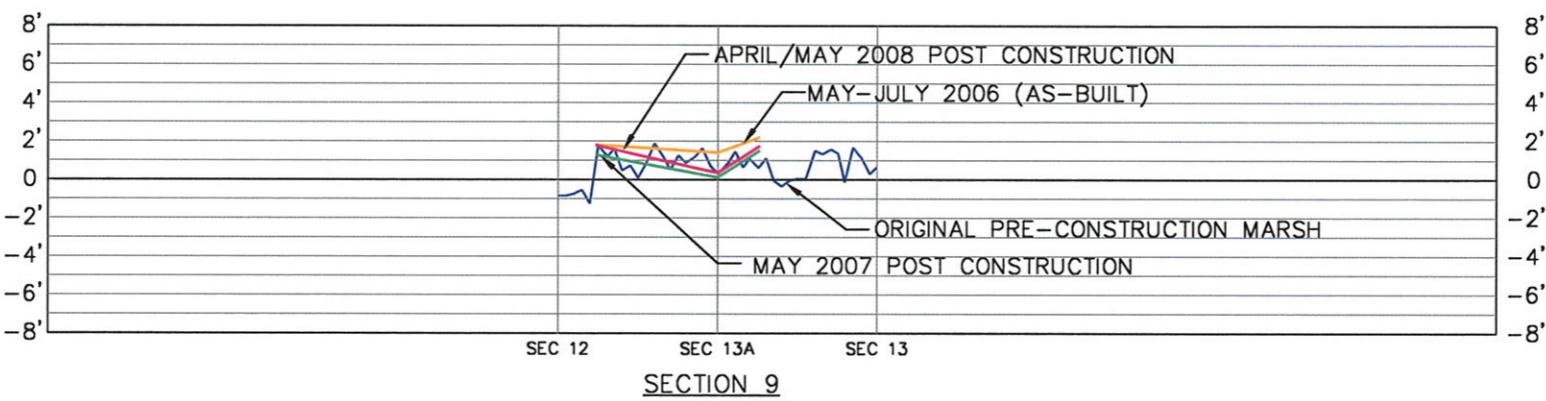
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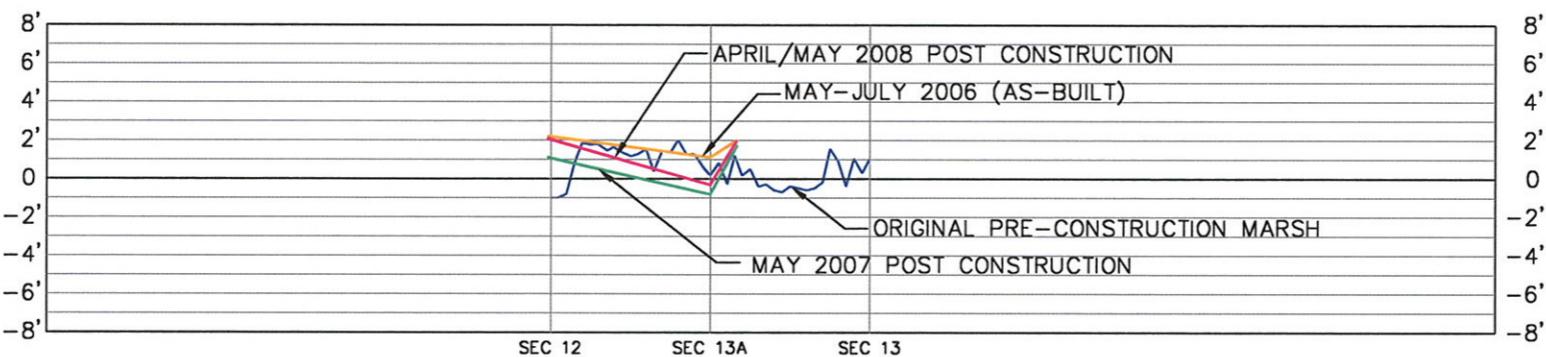
C



B



A



LEGEND	
ORIGINAL PRE-CONSTRUCTION MARSH TRANSECT POINTS FROM T. BAKER SMITH, INC.	
MAY-JULY 2006 (AS-BUILT)	
MAY 2007 POST CONSTRUCTION	
APRIL/MAY 2008 POST CONSTRUCTION	

SCALE: HORIZ. 1"=600'
VERT. 1"=10'

NOTE: SURVEY DATA REFERENCES FEILD BOOK # 231.
ALL POINTS REFERENCED TO LA SOUTH ZONE,
STATE PLANE NAD 83. ALL ELEVATIONS REFERENCED
TO LA COASTAL ZONE SECONDARY MONUMENTS
BA 37-SM-01 & BA 37-SM-02.



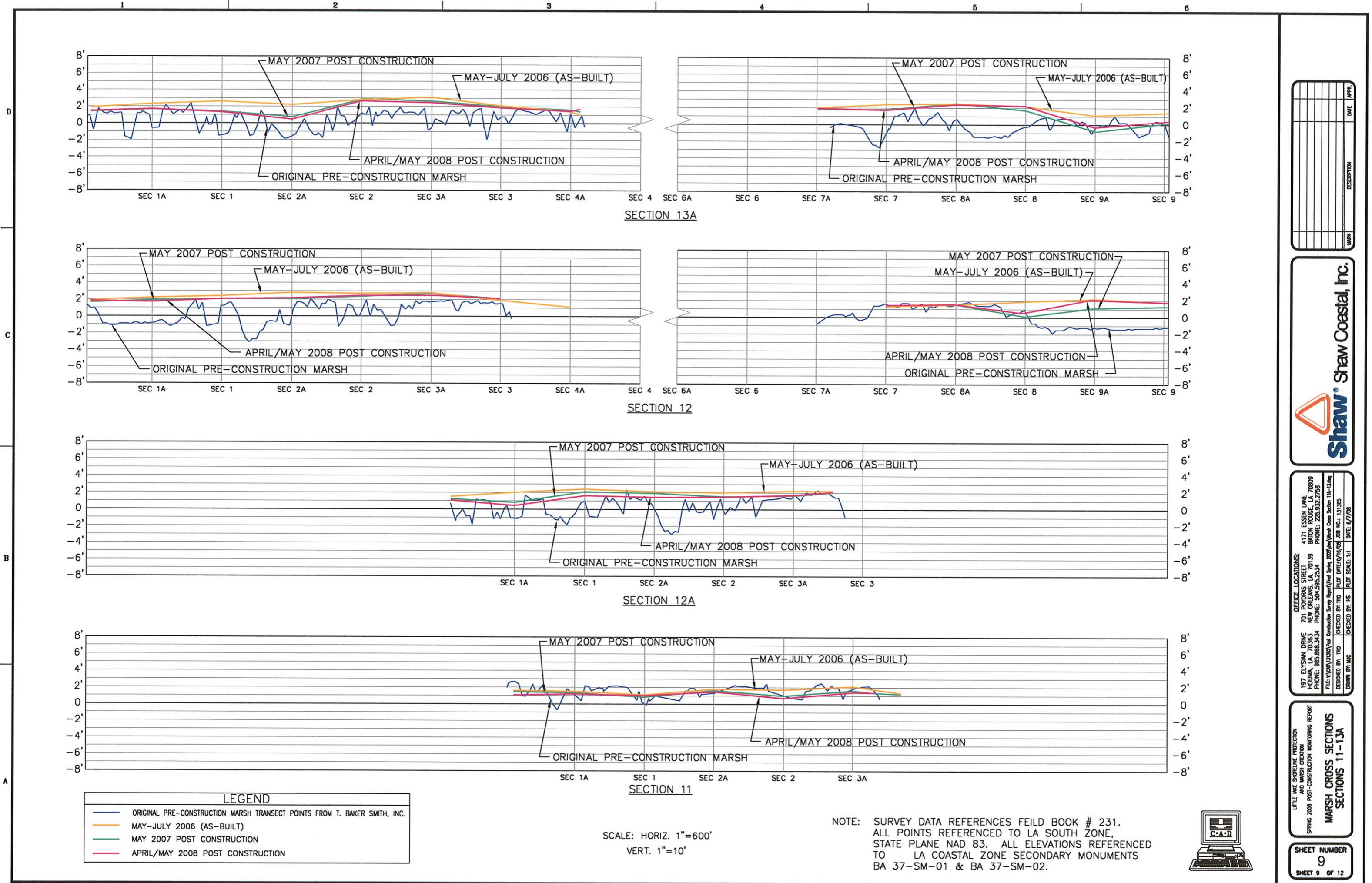
LITTLE LKE SHORELINE PROTECTION
AND MARSH CREATION
SPRING 2008 POST-CONSTRUCTION MONITORING REPORT
SECTION 9A-10

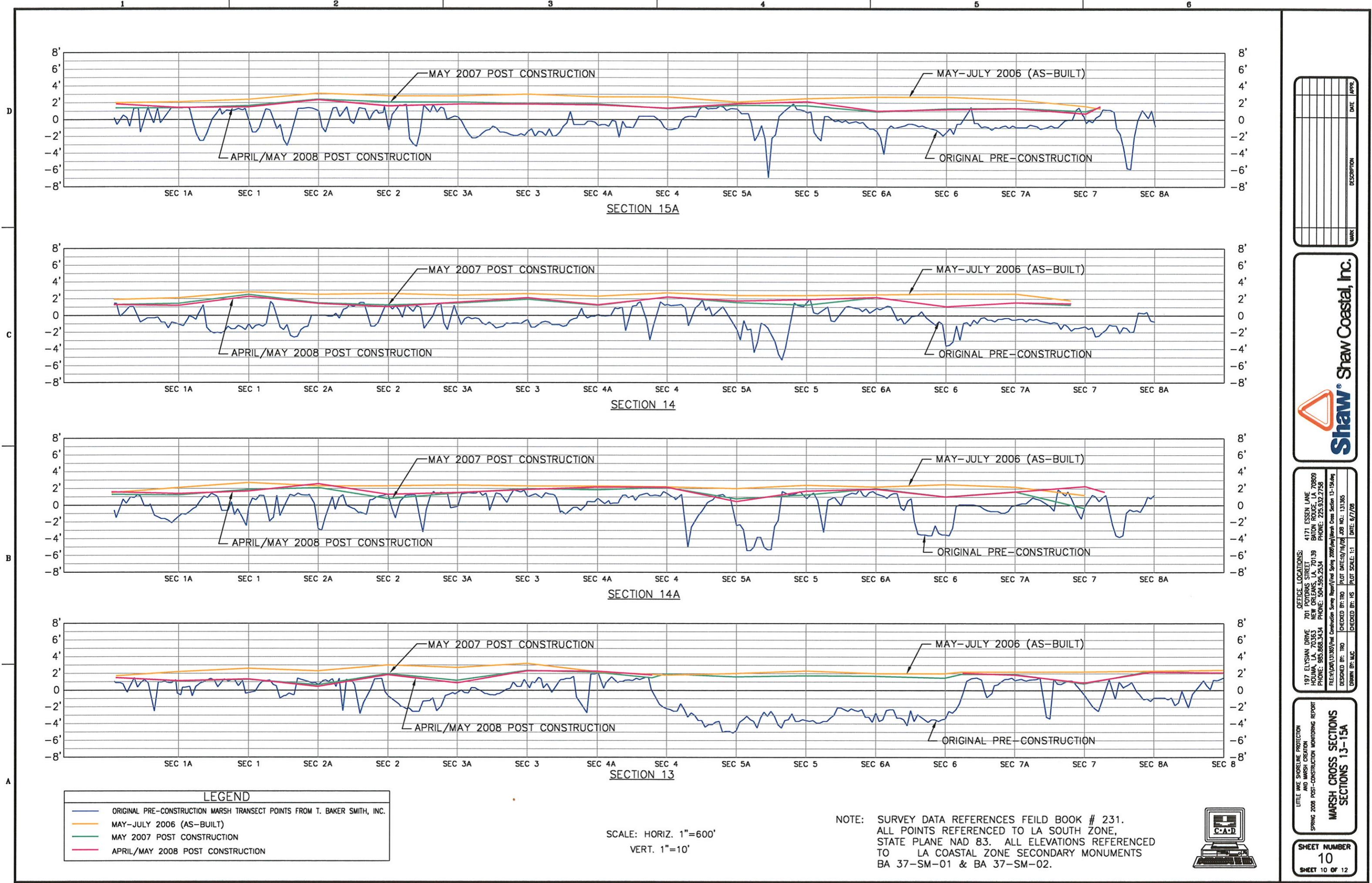
SHEET NUMBER
8
SHEET 8 OF 12

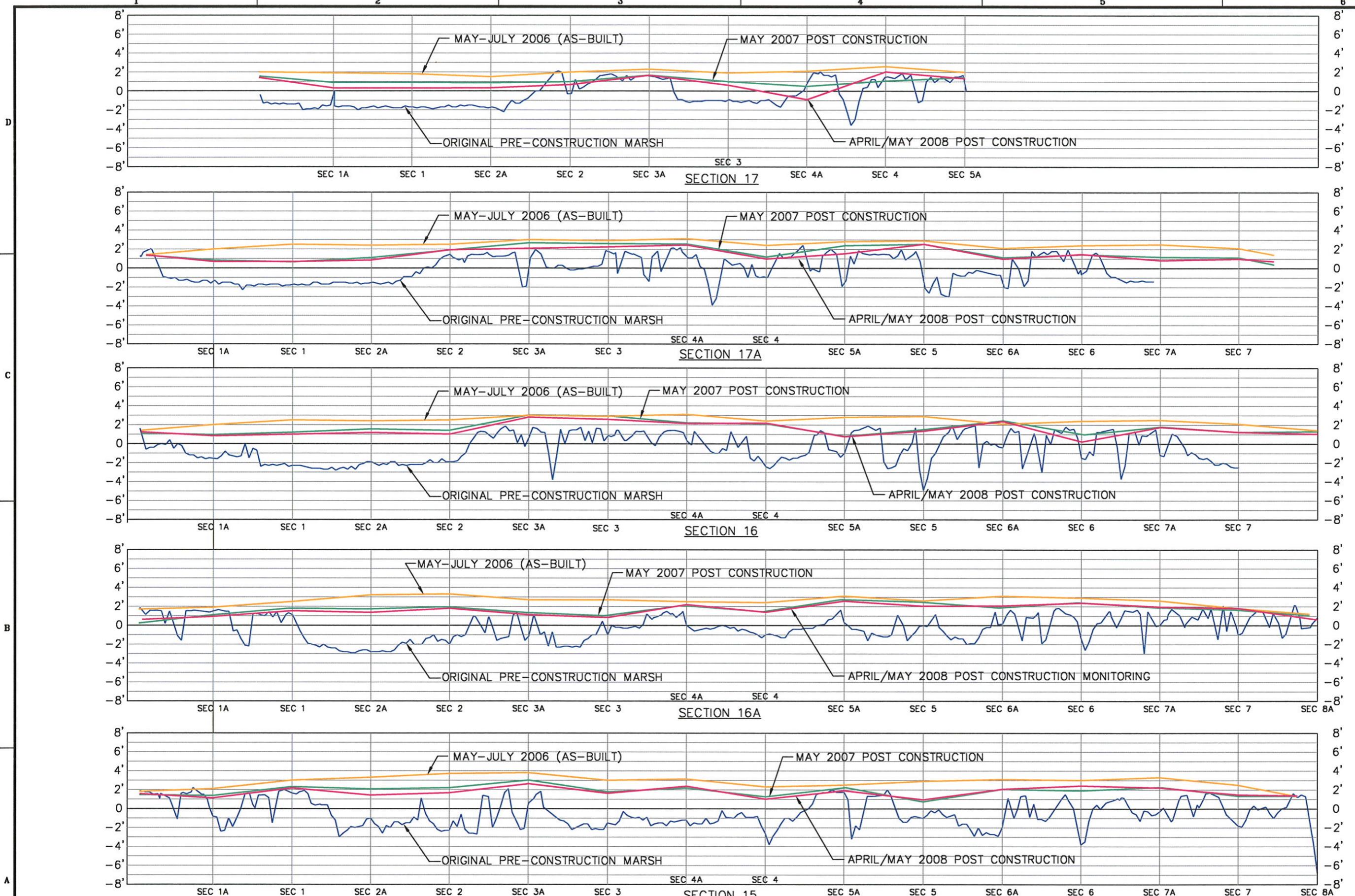
OFFICE LOCATIONS:	4171 ESSEN LANE BATON ROUGE, LA 70809 701 PUYDRAS STREET NEW ORLEANS, LA 70139 PHONE: 504.595.2534	4171 ESSEN LANE BATON ROUGE, LA 70809 701 PUYDRAS STREET NEW ORLEANS, LA 70139 PHONE: 225.932.2758
FILE#:	AJ00151305\field Spring 2008\Long Marsh Cross Section 9A-10.dwg	FILE#:
DESIGNED BY: TRO	PLOT DATE/04/16/08	DESIGNED BY: TRO
DRAWN BY: ANC	PLOT SCALE: 1:1	DRAWN BY: ANC
CHECKED BY: NS	DATE: 6/7/08	CHECKED BY: NS

WORK	DESCRIPTION	DATE /APR.
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LEGEND

- ORIGINAL PRE-CONSTRUCTION MARSH TRANSECT POINTS FROM T. BAKER SMITH, INC.
- MAY-JULY 2006 (AS-BUILT)
- MAY 2007 POST CONSTRUCTION
- APRIL/MAY 2008 POST CONSTRUCTION

SCALE: HORIZ. 1"=600'
VERT. 1"=10'

NOTE: SURVEY DATA REFERENCES FEILD BOOK # 231.
ALL POINTS REFERENCED TO LA SOUTH ZONE,
STATE PLANE NAD 83. ALL ELEVATIONS REFERENCED
TO LA COASTAL ZONE SECONDARY MONUMENTS
BA 37-SM-01 & BA 37-SM-02.



LITTLE WKE SHORELINE PROTECTION
AND MARSH CREATION
SPRING 2006 POST-CONSTRUCTION MONITORING REPORT
MARCH CROSS SECTIONS
SECTIONS 15-17

SHEET NUMBER
11
SHEET 11 OF 12

OFFICE LOCATIONS:	197 ELYSIAN DRIVE, NEW ORLEANS, LA 70136	4171 ESSEN LANE, BATON ROUGE, LA 70809
PHONE:	504.868.3434	225.932.2758
FILE:	P-20013-365\Post Construction Survey Report\Fall Spring 2006\New\Marsh Cross Section 15-17.dwg	
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DRAWN BY: MAC	CHECKED BY: HS	PILOT SCALE: 1:1 DATE: 6/7/08

WORK	DESCRIPTION	APPR.

Shaw® Shaw Coastal, Inc.

BAY L' OURS



SETTLEMENT PLATES

S.P. #	DATE INSTALLED	STATION	ELEV. INST.	ELEV. AFTER 2nd LIFT	DATE OF 2nd LIFT ELEV.	FINAL ELEVATION	DATE OF FINAL ELEV.	SPRING 2008 ELEV.	DATE OF SPRING 2008
01	11/27/06	14+23	6.48	5.842	01/26/07	5.867	02/11/07	5.709	05/09/08
02	11/14/06	23+93	6.32	3.978	01/26/07	3.951	02/11/07	3.595	05/09/08
03	11/09/06	34+22	7.02	5.155	01/29/07	5.167	02/11/07	4.933	05/09/08
04	11/06/06	44+41	6.96	4.627	01/29/07	4.574	02/11/07	4.414	05/09/08
05	11/06/06	54+75	7.71	5.892	01/29/07	5.897	02/11/07	5.664	05/09/08
06	11/05/06	63+17	6.98	4.955	01/29/07	4.968	02/11/07	4.699	05/09/08
07	11/05/06	71+47	7.92	4.427	01/29/07	4.423	02/11/07	4.079	05/09/08
08	10/25/06	82+37	6.98	5.456	01/29/07	5.507	02/11/07	5.322	05/09/08
09	10/06/06	92+32	6.70	5.838	01/29/07	5.839	02/11/07	5.817	05/09/08
10	09/28/06	102+21	6.96	5.309	12/07/06	5.279	02/11/07	5.183	05/09/08
11	09/01/06	112+90	6.4	4.370	12/07/06	4.188	02/11/07	3.822	05/09/08
12	07/09/06	123+14	7.74	6.360	12/07/06	6.157	02/11/07	5.743	05/09/08
13	07/06/06	133+25	7.32	3.904	09/14/06	3.611	02/11/07	3.244	05/09/08
14	06/27/06	144+18	6.68	5.842	09/14/06	5.557	02/11/07	5.381	05/09/08
15	06/16/06	154+23	7.02	5.433	09/14/06	5.169	02/11/07	4.926	05/09/08
16	06/03/06	164+05	6.95	6.863	08/01/06	6.103	02/11/07	5.931	05/09/08
17	05/21/06	175+51	7.53	6.761	08/01/06	6.363	02/11/07	6.268	05/09/08
18	05/18/06	190+71	7.68	6.424	08/01/06	5.972	02/11/07	5.739	05/09/08
19	05/06/06	203+43	8.51	6.776	08/01/06	6.266	02/11/07	6.086	05/09/08
20	04/11/06	216+05	7.8	5.818	08/01/06	5.647	02/11/07	5.515	05/09/08
21	04/05/06	229+62	7.31	5.395	08/01/06	4.805	02/11/07	4.654	05/09/08
22	03/31/06	240+24	8.38	5.295	08/01/06	4.581	02/11/07	4.345	05/09/08
23	03/26/06	250+46	7.64	5.498	08/01/06	5.155	02/11/07	4.988	05/09/08
24	03/21/06	262+76	8.26	7.064	08/01/06	6.708	02/11/07	6.688	05/09/08

NOTE: SURVEY DATA REFERENCES FIELD BOOK # 231
ALL POINTS REFERENCED TO LA SOUTH
ZONE, STATE PLANE NAD 83.
ALL ELEVATIONS REFERENCED TO LA
COASTAL ZONE SECONDARY MONUMENTS
BA 37-SM-01 & BA 37-SM-02.

SCALE IN FEET:



Shaw Coastal, Inc.

OFFICE LOCATIONS:	4171 ESSEN LANE 701 PUYDRAS STREET BATON ROUGE, LA 70809 PHONE: 225.932.2758
197 ELYSIAN DRIVE NEW ORLEANS, LA 70139 PHONE: 504.595.2534	197 ELYSIAN DRIVE HOUma, LA 70363 PHONE: 985.868.3434
FILE NUMBER: 12-SM-01 Description: Survey Report and Spring 2008 Settlement Plates JOB NO.: 131355 DESIGNED BY: TRO PLOT DATE: 03/16/08 DRAWN BY: MCH/SMB CHECKED BY: HS PLOT SCALE: 1:1 DATE: 6/7/08	

LITTLE LAKE SHORELINE PROTECTION AND MARSH CREATION
SPRING 2008 POST-CONSTRUCTION MONITORING REPORT
SETTLEMENT PLATE ELEVATION SURVEY

SHEET NUMBER 12 SHEET 12 OF 12

Section 3

Survey Data

SECTION 3

SURVEY DATA

A hard copy of the Survey data is attached.

Three (3) data files are produced in attached sheets:

- 1. Survey Data Spring 2008 Post Construction Monitoring.xls**
- 2. Rock Berm Settlement Plate Points.xls**
- 3. Survey Data Spring 2008 Settlement Plates.xls**
- 4. Survey Data July 2008 Verification Shots**

The files will contain survey data reported in Louisiana State Plane Coordinates, South Zone in feet with NAVD 88 elevations in feet.

SURVEY DATA SPRING 2008 POST CONSTRUCTION MONITORING REPORT

POINTS

Project No.: 131365

Coordinate System: US State Plane 1983

Zone: Louisiana South 1702

Project Datum: NAD 1983 (Conus)

Coordinate Units: US Survey Feet

Geoid Model: GEOID99 (Conus)

FIELD POINT NO.	CAD DWG. PT. NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
3000	6475	350225.59	3644785.02	1.63	2-South
3002	6487	350226.07	3644285.37	0.19	2A-South
3003	6489	350192.48	3643787.38	-0.08	1-South
3004	6491	350158.62	3643285.44	-1.93	1A-South
3006	6493	350107.64	3642808.35	1.02	South West
3007	6400	350610.71	3649775.72	-0.27	7-17
3009	6402	350577.03	3649277.67	0.14	7A-17
3010	6411	350549.33	3648777.00	1.20	6-17
3013	6412	350516.96	3648272.45	0.85	6A-17 (2x4 missing)
3015	6413	350491.80	3647778.18	0.87	5-17
3016	6414	350470.59	3647279.30	1.31	5A-17
3017	6416	350410.10	3646779.35	2.03	4-17
3018	6468	350410.47	3646280.31	-0.91	4A-17
3019	6470	350409.34	3645781.14	0.60	3-17
3020	6472	350406.67	3645279.09	1.65	3A-17
3021	6473	350406.11	3644778.74	0.67	2-17
3022	6486	350406.04	3644280.47	0.31	2A-17
3023	6488	350403.53	3643781.29	0.29	1-17
3024	6490	350404.72	3643278.56	0.30	1A-17
3025	6492	350406.54	3642809.35	1.39	West 17
3026	6396	350919.69	3649988.07	0.71	East-17A
3028	6399	350916.77	3649766.06	0.98	7-17A
3029	6401	350916.74	3649267.37	0.81	7A-17A
3030	6405	350915.32	3648765.23	1.46	6-17A
3031	6406	350914.34	3648264.70	0.95	6A-17A
3032	6409	350913.93	3647764.70	2.52	5-17A
3033	6410	350912.03	3647265.22	1.53	5A-17A
3034	6456	350910.22	3646764.01	0.97	4-17A
3035	6458	350908.64	3646262.72	2.43	4A-17A
3036	6464	350907.54	3645764.29	2.22	3-17A
3037	6466	350908.33	3645263.28	2.49	3A-17A
3038	6478	350906.57	3644762.64	1.91	2-17A
3039	6479	350905.33	3644264.43	0.83	2A-17A
3040	6483	350903.09	3643763.81	0.67	1-17A
3041	6484	350902.37	3643264.64	0.68	1A-17A
3042	6485	350893.08	3642840.12	1.36	West 17A
3044	6392	351421.69	3650659.95	0.98	8-17
3046	6394	351421.06	3650249.41	1.03	8A-16 (no 2x4)
3048	6395	351199.79	3650256.74	1.09	8A-17A
3049	6397	351418.60	3649749.68	1.24	7-16
3050	6398	351415.70	3649250.72	1.76	7A-16

SURVEY DATA SPRING 2008 POST CONSTRUCTION MONITORING REPORT

3051	6403	351415.09	3648750.45	0.22	6-16
3052	6404	351414.31	3648249.07	2.36	6A-16
3053	6407	351412.63	3647748.75	1.36	5-16
3054	6408	351415.16	3647249.77	0.76	5A-16
3055	6450	351410.26	3646749.17	2.18	4-16
3056	6454	351409.49	3646249.08	0.44	4A-16
3057	6460	351407.89	3645748.18	2.57	3-16
3058	6462	351405.90	3645247.58	2.81	3A-16
3059	6476	351407.42	3644749.25	1.00	2-16
3060	6477	351404.34	3644250.00	1.16	2A-16
3061	6480	351404.62	3643747.62	0.98	1-16
3062	6481	351403.16	3643247.63	0.82	1A-16
3063	6482	351406.54	3642791.75	1.24	West-16
3064	6368	351922.26	3650234.98	0.60	8A-16A
3066	6372	351918.35	3649734.74	1.79	7-16A
3067	6373	351915.90	3649234.06	1.95	7A-16A
3068	6385	351915.19	3648735.13	2.36	6-16A
3069	6386	351914.29	3648232.35	2.07	6A-16A
3070	6390	351913.08	3647733.70	2.03	5-16A
3071	6391	351911.78	3647232.95	2.56	5A-16A
3072	6427	351911.08	3646733.77	1.39	4-16A
3073	6428	351909.28	3646233.31	2.19	4A-16A
3074	6431	351907.82	3645733.91	0.81	3-16A
3075	6432	351908.03	3645232.67	1.11	3A-16A
3076	6443	351905.60	3644733.38	1.78	2-16A
3077	6444	351905.78	3644232.52	1.35	2A-16A
3078	6447	351906.28	3643733.04	1.52	1-16A
3079	6448	351902.38	3643232.61	0.92	1A-16A
3080	6449	351852.56	3642784.64	0.60	West-16A
3081	6367	352419.70	3650090.03	1.35	8A-15
3082	6369	352418.95	3649719.04	1.45	7-15
3084	6382	352416.65	3648719.78	2.42	6-15
3085	6384	352413.65	3648218.42	2.06	6A-15
3086	6387	352413.35	3647718.03	0.95	5-15
3087	6389	352412.15	3647218.47	1.90	5A-15
3088	6425	352411.72	3646717.69	0.99	4-15
3089	6426	352410.04	3646219.38	2.36	4A-15A
3090	6429	352407.21	3645717.51	1.62	3-15
3091	6430	352407.47	3645219.41	2.63	3A-15
3092	6441	352407.03	3644717.17	1.66	2-15
3093	6442	352405.38	3644216.72	1.41	2A-15
3094	6445	352403.44	3643716.35	2.16	1-15
3095	6446	352403.34	3643215.88	1.12	1A-15
3096	6504	352413.53	3642754.10	1.55	West-15
3097	6363	353036.65	3649701.53	1.65	7-15A & 14
3100	6360	352918.21	3649808.40	1.60	8A-15A
3101	6365	352918.24	3649703.68	0.72	7-15A
3102	6366	352916.55	3649203.81	1.35	7A-15A
3103	6376	352916.04	3648702.95	1.23	6-15A
3104	6377	352914.87	3648203.13	1.03	6A-15A
3105	6380	352913.41	3647701.97	2.14	5-15A
3106	6381	352911.70	3647202.49	1.89	5A-15A

SURVEY DATA SPRING 2008 POST CONSTRUCTION MONITORING REPORT

3107	6419	352910.41	3646700.75	1.37	4-15A
3108	6420	352909.75	3646202.44	1.75	4A-15A
3109	6423	352907.88	3645701.25	1.85	3-15A
3110	6424	352907.12	3645201.45	1.83	3A-15A
3112	6435	352906.54	3644701.51	1.60	2-15A
3113	6436	352904.26	3644201.82	2.35	2A-15A
3114	6439	352903.69	3643700.71	1.49	1-15A
3115	6440	352902.10	3643200.98	1.43	1A-15A
3116	6503	352902.21	3642753.19	1.86	West-15A
3118	6292	353635.10	3649679.93	1.52	7-14 & 14A
3119	6361	353417.44	3649583.82	1.43	7-14
3120	6362	353416.74	3649186.21	1.55	7A-14
3121	6374	353416.13	3648686.13	1.08	6-14
3122	6375	353414.42	3648186.41	2.17	6A-14
3123	6378	353412.78	3647686.43	1.92	5-14
3124	6379	353411.04	3647185.81	1.74	5A-14
3125	6417	353410.96	3646686.61	2.20	4-14
3126	6418	353409.25	3646185.51	1.26	4A-14
3127	6421	353408.65	3645685.04	2.12	3-14
3128	6422	353407.29	3645186.08	1.57	3A-14
3129	6433	353405.61	3644684.68	1.02	2-14
3130	6434	353404.12	3644185.88	1.42	2A-14
3131	6437	353402.82	3643685.47	2.26	1-14
3132	6438	353403.86	3643184.40	1.18	1A-14A
3133	6502	353405.60	3642719.70	1.28	West-14
3134	6295	354072.43	3648165.58	1.92	6A-13
3135	6300	354049.80	3647666.67	1.84	5-13
3136	6288	353917.64	3649812.90	1.58	7 & 8A-14A
3137	6291	353917.42	3649672.51	2.27	7-14A
3138	6293	353916.10	3649171.82	1.62	7A-14A
3139	6296	353915.02	3648671.57	1.00	6-14A
3140	6297	353914.60	3648170.44	1.92	6A-14A
3141	6301	353912.66	3647670.46	1.69	5-14A (no 2x4)
3142	6302	353912.36	3647168.01	0.44	5A-14A
3143	6331	353910.69	3646671.45	2.15	4-14A
3144	6333	353908.94	3646171.23	2.16	4A-14A
3145	6341	353908.77	3645670.74	1.87	3-14A
3146	6342	353906.98	3645169.48	1.49	3A-14A
3148	6353	353905.36	3644667.96	1.28	2-14A
3149	6354	353905.07	3644169.59	2.54	2A-14A
3150	6358	353903.62	3643669.27	1.68	1-14A
3151	6359	353902.31	3643169.03	1.38	1A-14A
3152	6501	353902.07	3642688.18	1.58	West-14A
3154	6278	354612.01	3650649.33	2.08	8-13
3156	6287	354538.50	3650125.66	2.16	8A-13
3157	6289	354417.61	3649656.28	0.88	7-13
3158	6290	354416.34	3649155.37	1.83	7A-13
3159	6294	354414.52	3648777.98	2.05	6-13
3162	6298	354312.79	3647159.02	1.69	5A-13
3163	6327	354410.02	3646550.87	1.81	4-13
3165	6328	354252.52	3646658.32	2.65	4-14A North
3167	6329	354409.53	3646154.94	2.27	4A-13

SURVEY DATA SPRING 2008 POST CONSTRUCTION MONITORING REPORT

3170	6338	354409.61	3645656.89	2.31	3-13
3172	6339	354405.25	3645154.14	0.86	3A-13
3173	6351	354403.47	3644651.90	1.84	2-13
3175	6352	354404.44	3644153.24	0.42	2A-13
3176	6356	354402.83	3643654.98	1.32	1-13
3177	6357	354403.04	3643154.32	1.11	1A-13
3178	6500	354406.03	3642703.58	1.49	West-13
3180	6261	355103.29	3652635.48	1.53	10-13A
3182	6263	354923.09	3652302.10	1.95	10A &10-13A
3183	6264	354923.26	3652141.29	1.11	10A-13A
3184	6265	354826.52	3652144.90	1.41	10A-13
3186	6268	354921.87	3651637.72	0.35	9-13A
3187	6269	354790.05	3651641.80	1.76	9-13A & 12
3188	6270	354921.20	3651137.59	-0.32	9A-13A
3189	6271	354838.97	3651140.20	1.98	9A-13 & 13A
3191	6277	354919.54	3650639.70	2.23	8-13A
3192	6279	354918.06	3650137.65	2.39	8A-13A
3193	6284	354917.77	3649637.55	1.73	7-13A
3194	6285	354749.60	3649147.38	1.90	7A-13A
3195	6321	354910.42	3646203.48	1.72	4A & 4-13A
3197	6322	354909.67	3646138.71	1.44	4A-13A
3198	6325	354907.80	3645638.38	1.85	3-13A
3199	6326	354907.01	3645139.24	2.45	3A-13A
3200	6345	354905.71	3644637.59	2.65	2-13A (no gauge)
3201	6346	354903.74	3644138.17	0.45	2A-13A
3203	6349	354903.15	3643637.12	1.32	1-13A
3204	6350	354901.67	3643137.95	1.70	1A-13A
3205	6499	354904.90	3642697.43	1.45	West-13A
3207	6262	355363.22	3652127.77	1.83	10A-12
3209	6266	355304.25	3651625.85	1.78	9-12
3210	6267	355432.55	3651106.72	2.09	9A-12
3211	6275	355420.50	3650623.82	0.50	8-12
3212	6276	355419.01	3650124.75	1.56	8A-12
3213	6280	355502.86	3649623.03	1.90	7A-North
3214	6281	355416.79	3649642.53	1.43	7-12
3215	6323	355408.19	3645623.52	2.11	3-12
3216	6324	355407.13	3645123.39	2.47	3A-12
3217	6343	355405.52	3644623.18	2.44	2-12
3218	6344	355405.40	3644123.10	2.13	2A-12
3219	6347	355403.20	3643623.04	2.05	1-12
3220	6348	355403.81	3643122.73	1.70	1A-12
3221	6498	355406.16	3642682.10	1.82	West-12
3222	6307	355907.70	3645392.36	2.06	3-12A
3223	6308	355906.63	3645107.83	1.69	3A-12A
3224	6315	355905.31	3644607.01	1.47	2-12A
3225	6316	355904.91	3644106.75	1.43	2A-12A
3226	6319	355904.00	3643607.39	1.62	1-12A
3227	6320	355902.06	3643106.48	0.41	1A-12A
3228	6497	355903.15	3642644.82	1.04	West-12A
3231	6305	356407.60	3645246.22	1.34	3-11
3232	6306	356407.07	3645092.18	1.39	3A-11
3233	6313	356404.51	3644590.68	0.68	2-11

SURVEY DATA SPRING 2008 POST CONSTRUCTION MONITORING REPORT

3234	6314	356404.17	3644091.78	1.46	2A-11
3235	6317	356404.57	3643590.10	0.99	1-11
3236	6318	356401.99	3643091.27	1.18	1A-11
3237	6496	356402.96	3642653.93	1.05	West-11
3238	6303	357145.25	3645068.79	1.00	3A-North
3239	6312	357060.31	3643071.51	0.34	1A -North
3240	6309	356959.15	3644574.48	1.17	2-North
3242	6310	356916.76	3644075.29	0.86	2A-North
3243	6311	356948.25	3643573.56	0.99	1-North
3244	6495	356988.51	3642637.58	1.01	West-North
3248	6272	351297.27	3650811.55	0.51	8-17A & 17
3250	6370	352417.34	3649223.20	2.20	7A-16 (edge water)
3253	6364	352921.69	3649705.52	0.47	7-15A water
	6505	354293.01	3648660.96	1.33	6-13 & 14A
	6508	355409.00	3646123.00	-3.35	4A-12

ROCK BERM SETTLEMENT PLATE POINTS

Project No.: 131365

Coordinate System: US State Plane 1983

Zone: Louisiana South 1702

Project Datum: NAD 1983 (Conus)

Coordinate Units: US Survey Feet

Geoid Model: GEOID99 (Conus)

S.P. #	NORTHING	EASTING	ELEV.	DESCRIPTION
01	365352.142	3636018.324	5.709	gal pipe w/cap
02	365149.255	3636952.543	3.595	gal pipe w/cap
03	365262.834	3637966.378	4.933	gal pipe w/cap
04	365336.749	3638980.145	4.414	gal pipe w/cap
05	365390.036	3640011.661	5.664	gal pipe w/cap
06	365545.332	3640837.939	4.699	gal pipe w/cap
07	365116.383	3641311.696	4.079	gal pipe w/cap
08	364094.918	3641610.403	5.322	gal pipe w/cap
09	363206.845	3642045.982	5.817	gal pipe w/cap
10	362419.17	3642638.286	5.183	gal pipe w/cap
11	361506.791	3643206.16	3.822	gal pipe w/cap
12	360625.732	3643684.855	5.743	gal pipe w/cap
13	359701.658	3644077.759	3.244	gal pipe w/cap
14	358822.436	3644635.849	5.381	gal pipe w/cap
15	358211.548	3645429.292	4.926	gal pipe w/cap
16	357429.328	3645746.241	5.931	gal pipe w/cap
17	356311.625	3645754.337	6.268	gal pipe w/cap
18	355029.326	3646434.523	5.739	gal pipe w/cap
19	354383.236	3647436.267	6.086	gal pipe w/cap
20	354751.807	3648618.369	5.515	gal pipe w/cap
21	355639.801	3649474.119	4.654	gal pipe w/cap
22	355616.066	3650529.569	4.345	gal pipe w/cap
23	355610.681	3651548.031	4.988	gal pipe w/cap
24	355588.459	3652776.384	6.688	gal pipe w/cap

SURVEY DATA SPRING 2008 SETTLEMENT PLATES									
S.P. #	DATE INSTALLED	STATION	ELEV. INST.	ELEV. AFTER 2nd LIFT	DATE OF 2nd LIFT ELEV.	FINAL ELEV.	DATE OF FINAL ELEV.	SPRING 2008 ELEV.	DATE OF SPRING 2008 ELEV.
1	11/27/06	14+23	6.48	5.842	01/26/07	5.867	02/11/07	5.709	05/09/08
2	11/14/06	23+93	6.32	3.978	01/26/07	3.951	02/11/07	3.595	05/09/08
3	11/09/06	34+22	7.02	5.155	01/26/07	5.167	02/11/07	4.933	05/09/08
4	11/06/06	44+41	6.96	4.627	01/26/07	4.574	02/11/07	4.414	05/09/08
5	11/06/06	54+75	7.71	5.892	01/26/07	5.897	02/11/07	5.664	05/09/08
6	11/05/06	63+17	6.98	4.955	01/26/07	4.698	02/11/07	4.699	05/09/08
7	11/05/06	71+47	7.92	4.427	01/26/07	4.423	02/11/07	4.079	05/09/08
8	10/25/06	82+37	6.98	5.456	01/26/07	5.507	02/11/07	5.322	05/09/08
9	10/26/06	92+32	6.70	5.838	01/26/07	5.839	02/11/07	5.817	05/09/08
10	09/28/06	102+21	6.96	5.309	12/07/06	5.279	02/11/07	5.183	05/09/08
11	09/01/06	112+90	6.40	4.370	12/07/06	4.188	02/11/07	3.822	05/09/08
12	07/09/06	123+14	7.74	6.360	12/07/06	6.157	02/11/07	5.743	05/09/08
13	07/06/06	133+25	7.32	3.904	09/14/06	3.611	02/11/07	3.244	05/09/08
14	06/27/06	144+18	6.68	5.842	09/14/06	5.557	02/11/07	5.381	05/09/08
15	06/16/06	154+23	7.02	5.433	09/14/06	5.169	02/11/07	4.926	05/09/08
16	06/03/06	164+05	6.95	6.863	08/01/06	6.103	02/11/07	5.931	05/09/08
17	05/21/06	175+51	7.53	6.761	08/01/06	6.363	02/11/07	6.268	05/09/08
18	05/18/06	190+71	7.68	6.424	08/01/06	5.972	02/11/07	5.739	05/09/08
19	05/06/06	203+43	8.51	6.776	08/01/06	6.266	02/11/07	6.086	05/09/08
20	04/11/06	216+05	7.80	5.818	08/01/06	5.647	02/11/07	5.515	05/09/08
21	04/05/06	229+62	7.31	5.395	08/01/06	4.805	02/11/07	4.654	05/09/08
22	03/31/06	240+24	8.38	5.295	08/01/06	4.581	02/11/07	4.345	05/09/08
23	03/26/06	250+46	7.64	5.498	08/01/06	5.155	02/11/07	4.988	05/09/08
24	03/21/06	262+76	8.26	7.064	08/01/06	6.708	02/11/07	6.688	05/09/08

SURVEY DATA JULY 2008 VERIFICATION SHOTS

POINTS

Project No.: 131365

Coordinate System: US State Plane 1983

Zone: Louisiana South 1702

Project Datum: NAD 1983 (Conus)

Coordinate Units: US Survey Feet

Geoid Model: GEOID99 (Conus)

FIELD POINT NO.	CAD DWG. PT. NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
205	205	350502.646	3648778.019	1.494	2x4
380	380	354050.152	3647667.136	1.206	3135
381	381	353912.832	3647671.274	1.59	3141
382	382	353413.157	3647686.648	1.854	3123
383	383	352913.503	3647701.855	1.938	3105
384	384	352911.442	3647202.413	1.793	3106
385	385	353411.164	3647185.594	1.662	3124
386	386	353909.53	3646171.121	1.777	3144
387	387	353408.417	3645685.44	1.796	3127
388	388	353905.664	3644667.637	1.277	3148
389	389	353904.808	3644169.616	2.063	3149
390	390	355405.615	3644623.072	1.991	3217
391	391	354414.47	3648777.903	2.189	3159
392	392	354749.776	3649147.353	2.156	3194
393	393	354072.256	3648166.121	2.117	3134
394	394	352417.387	3648719.84	2.456	3084
395	395	351914.573	3648232.336	1.999	3069
396	396	350548.552	3648776.376	0.928	3010
397	397	350409.866	3646779.189	1.788	3017
398	398	350410.282	3646279.781	-0.368	3018
399	399	352901.919	3642752.87	1.491	3116
400	400	353902.028	3642688.371	1.27	3152
401	401	353902.158	3643169.017	0.911	3151
402	402	355405.742	3642681.71	1.637	3221
403	403	356959.203	3644573.796	1.106	3240
404	404	355502.67	3649622.97	1.563	3213
405	405	355304.696	3651625.856	1.547	3209
406	406	355363.406	3652127.889	1.833	3207
407	407	355102.874	3652635.682	1.455	3180
408	408	354790.239	3651641.194	1.501	3187

Section 4

Field Notes

SECTION 4

FIELD NOTES

All field survey information documented in field book #231, recorded is attached.

CONTENTS

LITTLE LAKE MONITORING CELLS
FIELD BOOK # 231

Peterson LITTLE LAKE MONITORING CELLS
Book # 231
Billiot

(24)
#131365
4/30/2008

STAFF Gage @ Camp 1.00

1 363981.440 3638772 830 2.98

BA-37-SMO2

2 350270.150 3655746 230 3.38

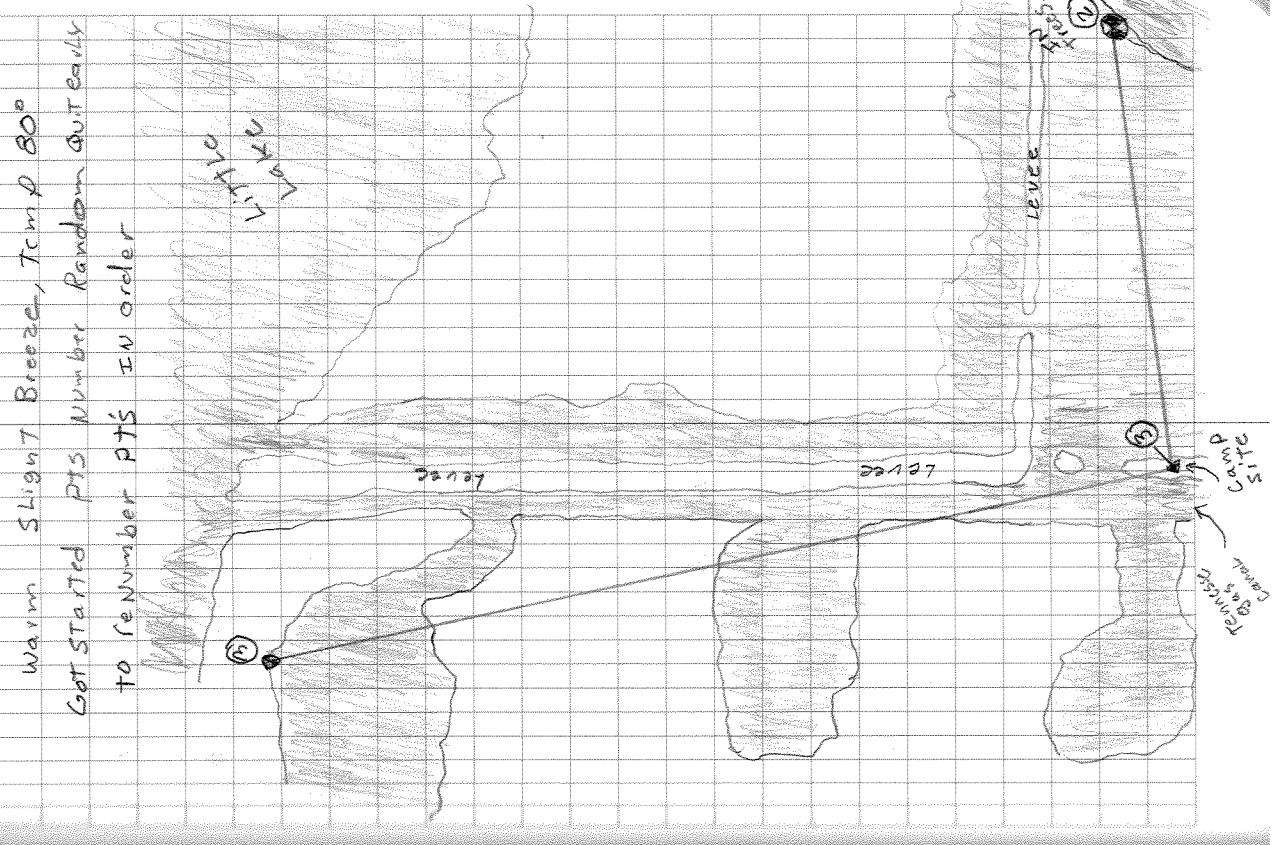
BA-37-SMO2

3 349553.887 3642771 737 3.69

rr spike set on top of 12" pile

Camp Site

STAFF Gauge 1.00



BA-37-S101	LITTLE LAKE	MONITORING CELLS
'8A-37-S102	FIELD BOOK #231	
3000	350225.590	3644785.020
3002	350226.070	36447285.370
3003	350192.480	3643787.380
3004	350158.623	3643285.414
3006	350107.640	3642808.350
3007	350610.710	3649715.720
3009	350577.030	3649277.670
3010	350549.324	3648776.999
3013	350516.956	3648272.445
3015	350491.800	3647778.180
3016	350470.590	3647272.300
3017	350410.100	3646779.350
3018	350410.470	3646280.310

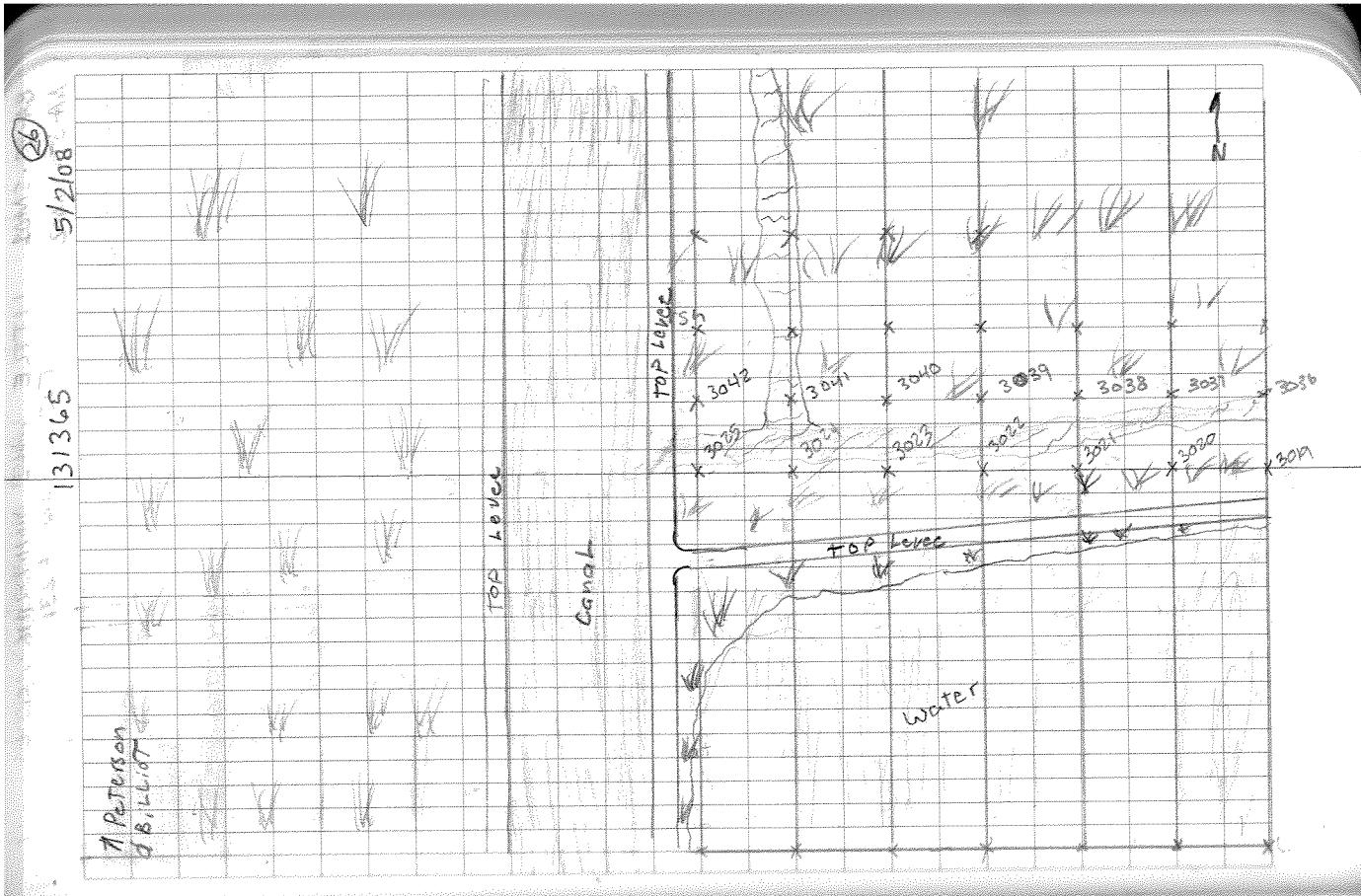
P Peterson Little Lake Monitoring Cells
P Billiot Field Book #231

(25) 5/6/08
Started with New Wimberells Temp 85°
windy, warm, water 10° Gauge @ Camp 2.00



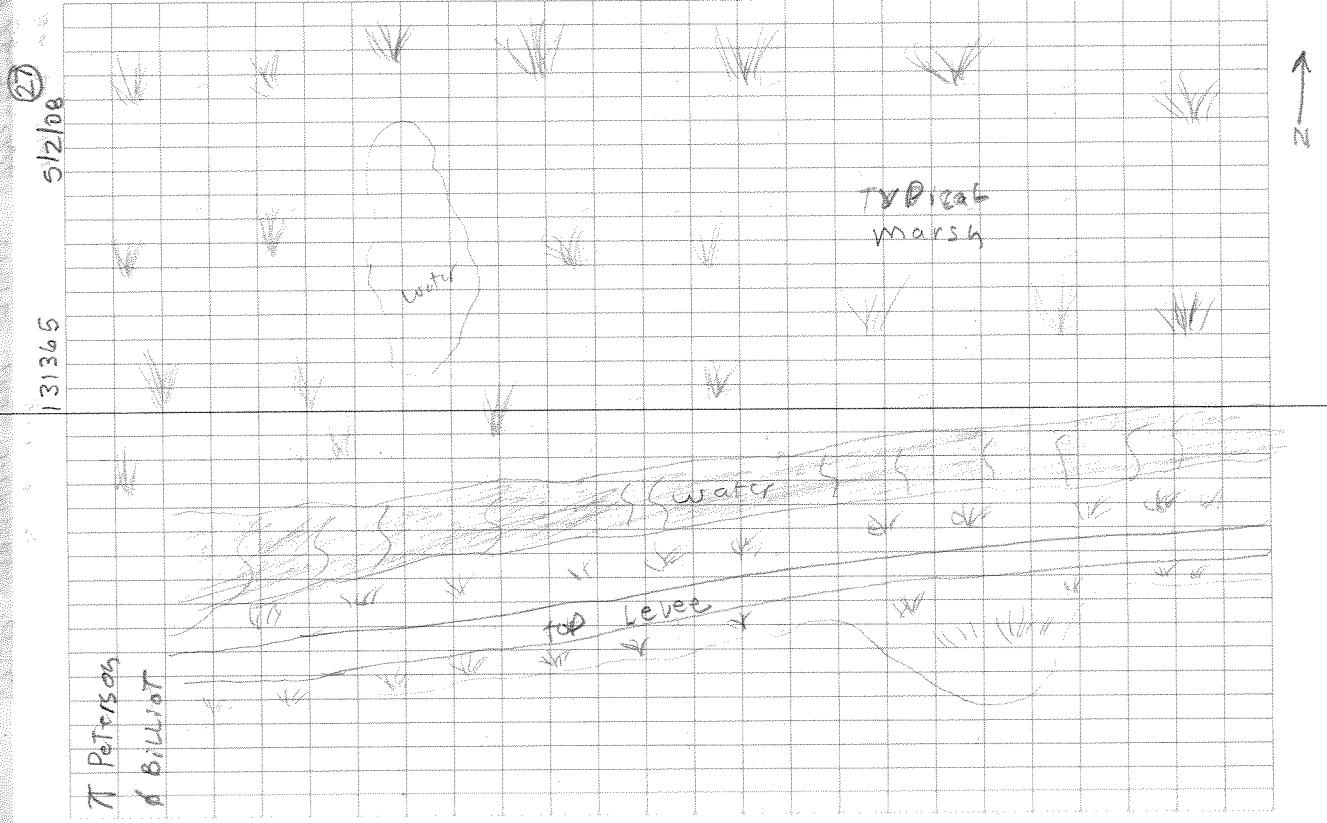
BA-37-SNAP LITTLE LAKE MONITORING CELLS
FIELD Book #231

3019	350409.	340	3645781.140	0.60
3020	350406.	670	3645279.090	1.65
3021	350404.	110	3644778.740	0.66
3022	350416.	040	3644280.470	0.31
3023	350403.	530	3643781.290	0.29
3024	350404.	720	3643278.560	0.30
3025	350406.	540	3642809.350	1.39
3026	350919.	685	3649988.073	0.71
3028	350916.	770	3649746.060	0.98
3029	350916.	740	3649267.370	0.809
3030	350915.	320	3648765.230	1.46
3031	350914.	340	3648264.700	0.95
3032	350913.	930	3647764.700	2.52



BA-37-SM02 LITTLE LAKE MONITORING CELLS
BA-37-SM02

	FIELD BOOK # 23,		
3033	350912. 030	364726.220	1.58
	NG		
3034	350910. 220	364676. 010	0.96
	NG		
3035	350908. 640	364626.2. 720	2.43
	NG		
3036	350907. 540	364576.4. 290	2.22
	NG		
3037	350908. 330	364526.3. 280	2.49
	NG		
3038	350906. 570	364476.2. 640	1.91
	NG		
3039	350905. 330	364426.4. 430	0.82
	NG		
3040	350903. 090	364376.3. 810	0.67
	NG		
3041	350902. 370	364326.4. 640	0.68
	NG		
3042	350893. 080	364128.40. 120	1.36
	NG		
3044	351421. 685	3650659. 945	0.98
	NG		
3046	351421. 060	3650249. 410	1.03
	NG		
3049	351418. 600	3649749. 680	1.24
	NG		



131365 5/2008 27

T Peterson
d'Billiot

8A-37-SM02 LITTLE LAKE MONITORING CELLS
BOOK #231

3050	351415.700	3649250.720	1.76
	N6		
3051	351415.090	3648750.450	0.22
	N6		
3052	351414.310	3648249.070	2.36
	N6		
3053	351412.630	3647748.750	1.36
	N6		
3054	351415.160	3647249.770	0.76
	N6		
3055	351410.260	3646749.170	2.18
	N6		
3056	351409.490	3646249.080	0.436
	N6		
3057	351407.890	3645748.180	2.57
	N6		
3058	351405.900	3645247.580	2.81
	N6		
3059	351407.420	3644749.250	1.00
	N6		
3060	351404.340	3644250.000	1.16
	N6		
3061	351404.620	3643747.620	0.98
	N6		
3062	351403.160	3643247.630	0.82
	N6		

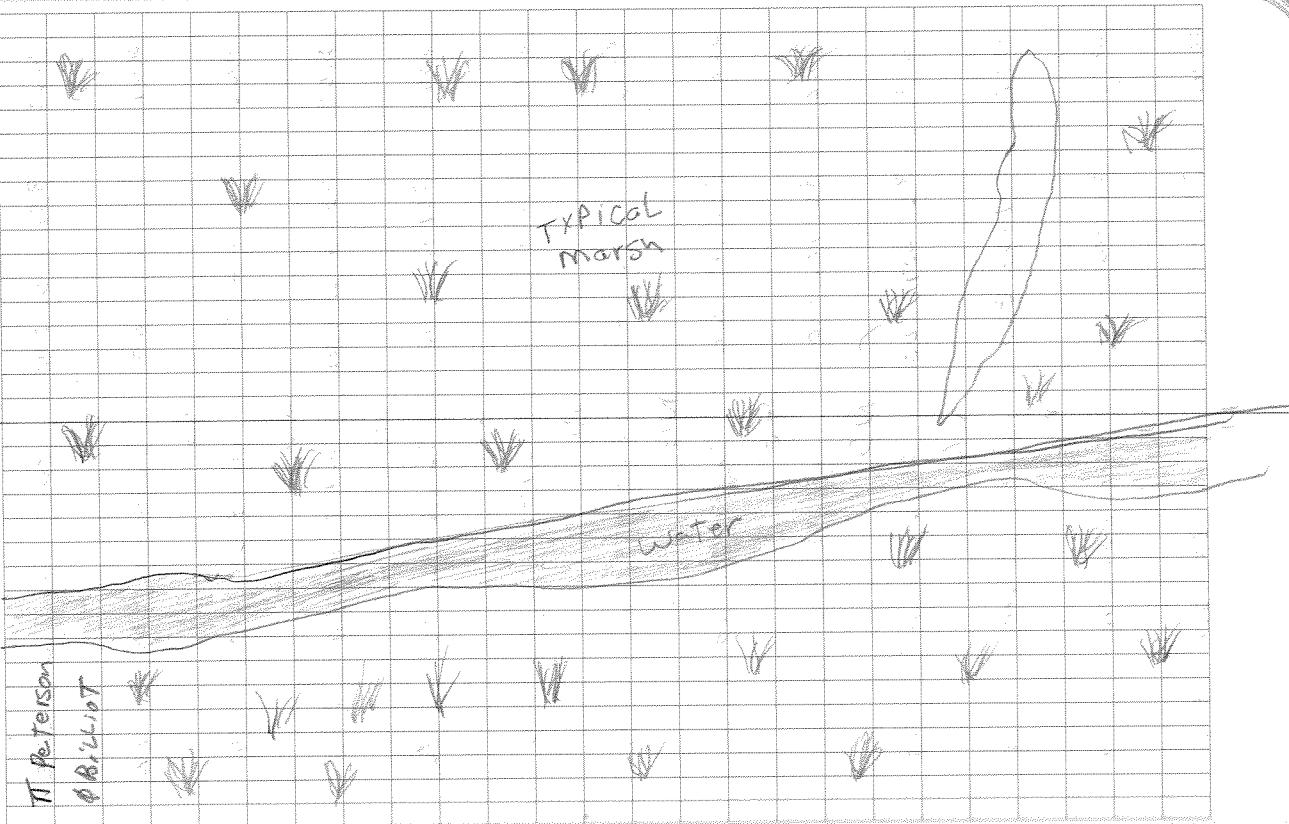
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5/208

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TT Peterson
Billiot

Typical
marsh

water



BA-37-SM02	LITTLE LAKE FIELD BOOK # 231	MONITORING CELLS
3063	351406. 540	3642291. 750 1.24
		NC
3064	351922. 260	3650234. 980 0.60
		NC
3066	351918. 350	3649734. 740 1.79
		NC
3067	351915. 900	3649234. 060 1.95
		NC
3068	351915. 190	3648735. 130 2.36
		NC
3069	351914. 290	3648232. 350 2.06
		NC
3070	351913. 080	3647733. 700 2.03
		NC
3071	351911. 780	3647232. 950 2.56
		NC
3072	351911. 080	364733. 770 1.39
		NC
3073	351909. 280	36446233. 310 2.18
		NC
3074	351907. 820	3645733. 910 0.81
		NC
3075	351908. 030	3645232. 670 1.11
		NC
3076	351905. 600	3644733. 380 6.78
		NC

(27) 5/2/08

131365

T Peterson
of Billiot

typical
marsh

BA-37-5M01	LITTLE LAKE	NO NITRATING CELLS	
BA-37-5M02	BA004 # 231		
3077	351 905. 780	3644232. 520	1.35
	N/G		
3078	351 906. 280	3643733. 040	1.52
	N/G		
3079	351 902. 380	3643232. 610	0.92
	N/G		
3080	351 852. 560	3642784. 640	0.60
	N/G		
3081	352 419. 700	3650090. 030	1.35
	N/G		
3082	352 418. 950	3649719. 040	1.45
	N/G		
3083	352 416. 620	3649218. 700	0.47
	N/G		
3084	352 416. 650	3648719. 780	2.414
	N/G		
3085	352 413. 650	3648218. 420	2.05
	N/G		
3086	352 413. 350	3647718. 030	0.94
	N/G		
3087	352 412. 150	3647218. 470	1.87
	N/G		
3088	352 411. 720	3646717. 690	0.99
	N/G		
3089	352 410. 037	3646219. 376	2.36
	N/G		

(30)

5/2/08

TT Peterson
J. B. Elliott

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LITTLE LAKE MONITORING CELLS			
84-37-SN01	84-37-SN02	800L # 231	
3090	352407. 210	3645717. 510	1.62
3091	352407. 470	3645219. 410	2.631
3092	352407. 030	3644717. 120	1.66
3093	352405. 380	3644216. 720	1.41
3094	352403. 440	3643716. 350	2.16
3095	352403. 340	3643215. 880	1.11
3096	352413. 530	3642754. 100	1.55
3097	353036. 450	3649701. 530	1.65
3100	352918. 214	3649808. 462	1.60
3101	352918. 240	3649703. 680	0.72
3102	352916. 550	3649203. 810	1.35
3103	352916. 040	3648702. 950	1.23

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131365 5/2/08

Peterson
of B. Elliot

End Day Temp 89° windy clear, Gauge @ Camp 2.00

9:30 am

5/5/2008

Breezy Temp 71 humid staff gauge @ camp 1.90

BA-37-SM01 LITTLE LAKE MONITORING CELLS
BA-37-SM02 BOOK #231

3104	352914	870	3648203.	130	1.03	N G
3105	352913.	410	3647701.	970	2.14	N G
3106	352911.	700	3647202.	490	1.89	N G
3107	352910.	410	3646700.	750	1.36	N G
3108	352909.	750	3646202.	440	1.74	N G
3109	352907.	880	3645701.	250	1.845	N G
3110	352907.	120	3645201.	450	1.83	N G
3112	352906.	540	3644701.	510	1.60	N G
3113	352904.	260	3644201.	820	2.34	N G
3114	352903.	690	3643700.	710	1.49	N G
3115	352902.	100	3643200.	980	1.43	N G
3116	352902.	210	3642753.	190	1.84	N G

(32)
5/5/2008

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T. Peterson
& Billiot

Typical
Marsh

PA-37-SM02 LITTLE LAKE MONITORING CELLS
PA-37-SM02

FIELD BOOK # 231

3/18	353417.440	100	3649679.930	1.52
3/19	353417.440	NG	3649583.820	1.43
3/20	353414.740	NG	3649186.210	1.55
3/21	353416.130	NG	3648686.130	1.08
3/22	353414.420	NG	3648186.410	2.17
3/23	353413.780	NG	3647686.430	1.92
3/24	353411.040	NG	3647185.810	1.74
3/25	353410.960	NG	3646686.610	2.19
3/26	353409.250	NG	3646186.510	1.26
3/27	353408.650	NG	3645685.040	2.12
3/28	353407.290	NG	3645186.080	1.56
3/29	353405.610	NG	3644684.680	1.02

W. Peterson
of Bill ist

(33)

5/5/2008

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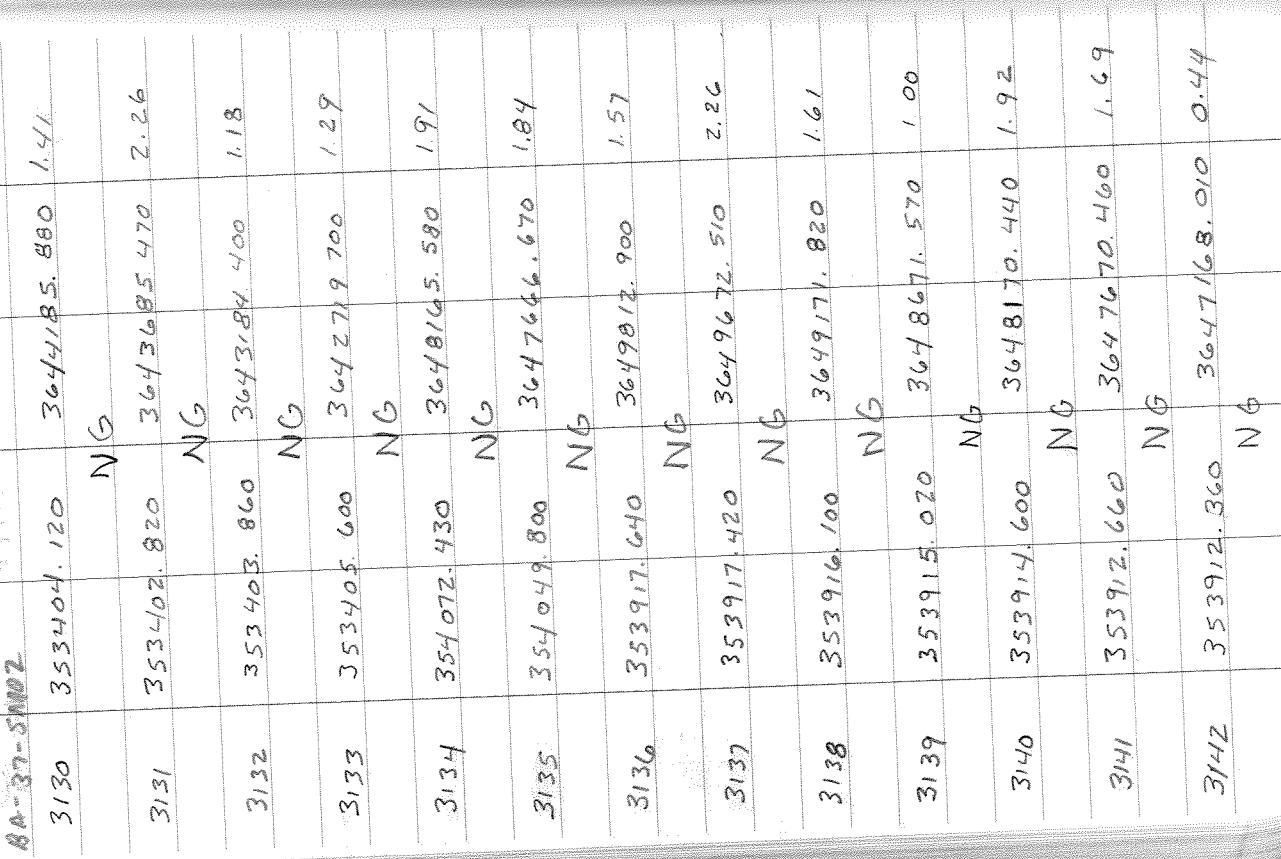
Typical
marsh

PA-37-SN02 LITTLE LAKE MONITORING CELLS

PA-37-SN02	353404.120	364185.880	1.41
3130	353402.820	3643695.470	2.26
3131	353403.860	3643184.400	1.18
3132	353405.600	3642719.700	1.29
3133	353405.600	3641645.580	1.91
3134	354072.430	3641646.670	1.84
3135	354049.800	3647646.670	1.57
3136	353917.640	3649812.900	2.26
3137	353917.420	3649672.510	1.61
3138	353916.100	3649171.820	1.00
3139	353915.020	3648671.570	1.92
3140	353914.600	3648170.440	1.69
3141	353912.660	3647670.460	0.44
3142	353912.360	3647168.010	

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5/5/2008

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K Peterson
J Billiottypical
marsh

BA-37-SM02 LITTLE LAKE MONITORING CELLS
BA-37-SM02 FIELD BOOK # 231

3143	353910. 690	3646671. 450	2.14
3144	353908. 940	3646711. 280	2.15
3145	353908. 770	3645670. 740	1.87
3146	353906. 980	3645169. 480	1.49
3148	353905. 360	3644667. 960	1.28
3149	353905. 070	3644149. 590	2.53
3150	353903. 620	3643669. 270	1.68
3151	353902. 310	3643169. 030	1.37
3152	353902. 070	3642688. 180	1.58
3154	354612. 010	3650649. 330	2.08
3155	354538. 560	3650125. 093	2.22
3156	354538. 500	3650125.660	2.16

TH Peterson
of Bellot

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5/1/2008

typical
marsh

B4-37-SM02 LITTLE LAKE MONITORING CELLS
FIELD BOOK #231

3157	354417.610	3649656.280	0.88	
3158	354416.340	3649155.370	1.83	
3159	354414.520	3648777.975	2.04	
3161	351481.717	3650321.231	1.76	
3162	354312.790	3647159.020	1.68	
3163	354410.017	3646550.869	1.81	
3165	354252.520	3646658.320	2.64	
3166	351297.212	3650011.508	0.51	
3167	354409.530	3646154.940	2.27	
3168	354416.857	3645692.879	2.50	
3170	354409.613	3645656.894	2.31	
3172	354405.250	3645154.140	0.86	

(36)
TPeterson
B.LLiot

131365

5/5/2008

Tide at
marsh

B4-37-SW02 LITTLE LAKE MONITORING CELLS
A4-37-SM02 FIELD BOOK # 231

3173	354403.470	364446.51.	900	1.837	
	NC				
3175	354404.440	3644153.	240	0.412	
	NC				
3176	354402.830	3643654.	980	1.323	
	NC				
3177	354403.040	3643154.	320	1.110	
	NC				
3178	354406.030	3642703.	580	1.419	
	NC				
3180	355103.290	3652635.	480	1.53	
	NC				
3182	354923.090	3652302.	100	1.94	
	NC				
3183	354923.260	3652141.	290	1.11	
	NC				
3184	354826.520	3652141.	900	1.41	
	NC				
3186	354921.870	3651637.	720	0.35	
	NC				
3187	354790.050	3651641.	800	1.74	
	NC				
3188	354921.200	3651137.	590	-0.32	
	NC				
3189	354838.970	3651140.	200	1.98	
	NC				

131365 5/15/2008

(37)

A Peterson
of Billiot

B4-37-SM02 LITTLE LAKE MONITORING CELLS
B4-37-SM02

3191	354919.540	3650639.700	2.23			
	N6					
3192	354918.060	3650137.650	2.39			
	N6					
3193	354917.710	3649637.550	1.72			
	N6					
3194	354749.600	3649147.380	1.90			
	N6					
3195	354910.420	36446203.482	1.72			
	N6					
3197	354909.670	36446138.710	1.44			
	N6					
3198	354907.800	3645638.380	1.84			
	N6					
3199	354907.010	3645139.240	2.44			
	N6					
3200	354905.710	3644637.590	2.65			
	N6					
3201	354903.740	3644138.170	0.45			
	N6					
3202	354903.150	3643637.120	1.32			
	N6					
3204	354901.670	3643137.950	1.70			
	N6					
3205	354901.900	3642697.430	1.45			
	N6					

Typical
marsh

(32)

5/15/2008

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BA-37-SM02 LITTLE LAKE MOUNTAINS CRUS
BA-37-SM02 BOOK #231

3207	355363.220	3652127.770	1.834
3209	355304.247	3651625.846	1.78
3210	355432.550	3651106.720	2.08
3211	355420.500	3650623.820	0.50
3212	355419.010	3650124.750	1.56
3213	355502.860	3649623.030	1.90
3214	355416.790	36496402.530	1.43
3215	355408.190	3645623.520	2.11
3216	355407.130	3645123.390	2.47
3217	355405.520	3644623.180	2.44
3218	355405.400	3644123.100	2.13
3219	355403.200	3643623.040	2.05
3220	355403.810	3643122.780	1.69

(39)
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T Peterson
d B.L. OT

Physical

marsh

BA-37-SN02 LITTLE LAKE MONITORING CELLS
BA-37-SN02 BOOK # 231

3221	355406.160	3642682.100	1.81
	NG		
3222	355907.700	3645392.360	2.05
	NG		
3223	355904.630	3645107.830	1.69
	NG		
3224	355905.310	3644607.010	1.47
	NG		
3225	355904.910	3644106.750	1.43
	NG		
3226	355904.000	3643607.390	1.62
	NG		
3227	355902.060	3643106.480	0.41
	NG		
3228	355903.150	3642644.820	1.04
	NG		
3229	356409.524	3645436.707	1.25
	NG		
3231	356407.600	364546.220	1.33
	NG		
3232	356407.070	3645092.180	1.39
	NG		
3233	356404.510	3644590.680	0.68
	NG		

④ 5/5/2008

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W.Peterson
of B.Liot

typical

marsh

BA-37-5M01 LITTLE LAKE MONITORING CELLS

BA-37-5M02 FIELD BOOK #231

3234	356404.170	3644091.780	1.46	Apeterson d Billiot
3235	356404.570	3643591.100	0.91	
3236	356401.990	3643091.270	1.18	
3237	356402.960	3642653.930	1.05	
3238	357145.250	3645068.790	1.00	
3239	357060.310	3643071.510	0.33	
3240	356959.153.	3644574.481	1.17	
3241	356916.760	3644075.290	0.86	
3242	356948.250	3643573.560	0.99	
3243	356988.514	3642637.583	1.01	
3244	357003.159	3642626.731	1.04	
3245				NG

(41) 131345 5/5/2008

LITTLE LAKES PARK BERM SETTLEMENT PLATES
BA-37-SM01 F/ELD. BOOK #231
BA-37-SM02

Staff Gage @ camp 2.00

1 363981.440 3638772.850 2.98

BA - 37- SM01

2 350270.150 3655746.230 3.38

BA - 37- SM02

3 349553.807 3642771.737 3.69

tr spike set on top of 12" pile

camp site

STAFF GAUGE 2.00

windy, warm, water up gauge @ camp 2.00

#131365 5/9/08

T Peterson
Ø Billiot

(42)

LITTLE LAKE ROCK & FIELD SETTLEMENT PLATES
BOOK # 231

BA-37-SM02 3636018.324 5.709 # 131365 5/9/08

gal pipe w/cap BA-37-SM02
365149.225 3636952.543 3.595

gal pipe w/cap 3637016.378 4.933

gal. pipe w/cap 3638980.145 4.414
365336.749

gal. pipe w/cap 364011.661 5.664
365390.036

gal pipe w/cap 3640837.939 4.699
365545.332

gal pipe w/cap 3641311.686 4.079
365116.383

gal pipe w/cap 3641110.403 5.322
364094.918

gal pipe w/cap 3642045.982 5.817
363206.845

gal pipe w/cap 3642638.286 5.183
362449.17

gal pipe w/cap 3643208.16 3.822
361506.791

gal pipe w/cap 3643684.855 5.743
360625.732
gal pipe w/cap

(43)

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BA-37-SM02

BA-37-SM02

LITTLE RIVER RECYCLE CENTER
FIELD ACRES 323

B4-37-SM02
BA-37-SM02

13 359701.458 3644077.259 3.244
gal pipe w/cap

14 358822.434 3644635.849 5.381
gal pipe w/cap

15 358211.548 3645422.292 4.926
gal pipe w/cap

16 357429.328 3645746.241 5.931
gal pipe w/cap

17 356311.625 3645734.337 6.268
gal pipe w/cap

18 355029.326 3646434.523 5.739
gal pipe w/cap

19 354383.236 3647743.267 6.086
gal pipe w/cap

20 354751.807 3648618.369 5.575
gal pipe w/cap

21 353639.801 3649474.119 4.654
gal pipe w/cap

22 355616.066 3650529.529 4.945
gal pipe w/cap

23 355610.681 3651548.031 4.988
gal pipe w/cap

24 355588.459 3652776.384 6.688
gal pipe w/cap

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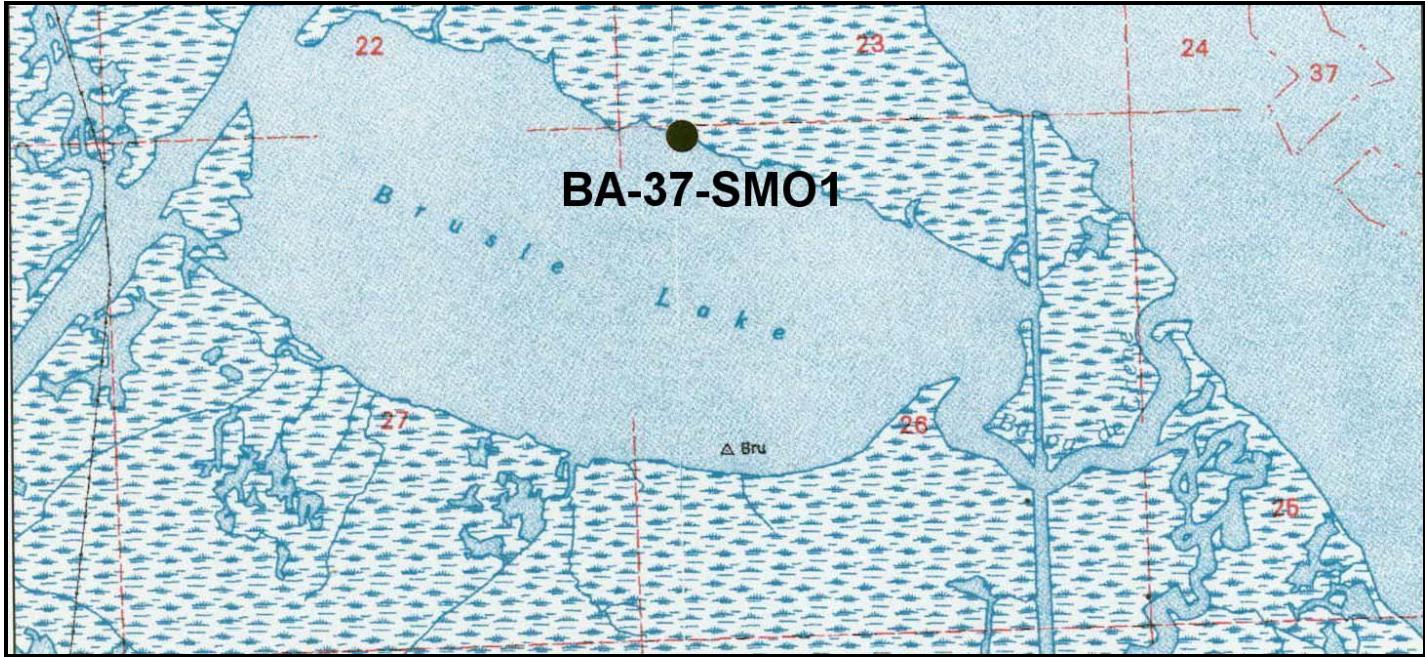
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BA - 37 - SMC01

BA - 37 - SMC02

Appendix A

Secondary Monument Data Sheet



VICINITY MAP

Scale: 1" = 2000'

Reproduced from USC&GS "Golden Meadow Farms" Quadrangle

Station Name: "SM01"

Location: The monument stamped BA-37-SM01 is located near the north shore of Brusle Lake in Lafourche Parish, Louisiana. The monument is approximately 11.8 miles southwest of the intersection of Bayou Lafourche and the Gulf Intracoastal Waterway in Larose, Louisiana.

Monument Description: NGS style floating sleeve monument; datum point set on 9/16" stainless steel sectional rods driven 88 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA-37-SM01

Installation Date: 08-15-02 **Date of Survey:** August 16 and 17, 2002

Monument Established By: T. Baker Smith & Son, Inc.

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 Geodetic Position

Lat. 29°29' 45.72302" N

Long. 90°12' 29.46131" W

Adjusted NAD 83 Datum LSZ (1702) Feet

N= 363,981.440

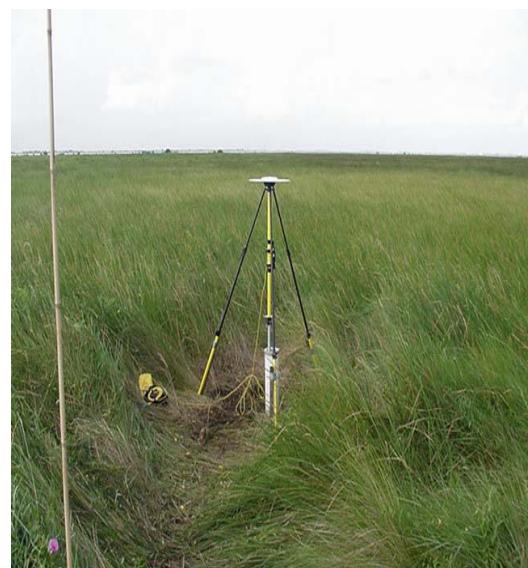
E= 3,638,772.849

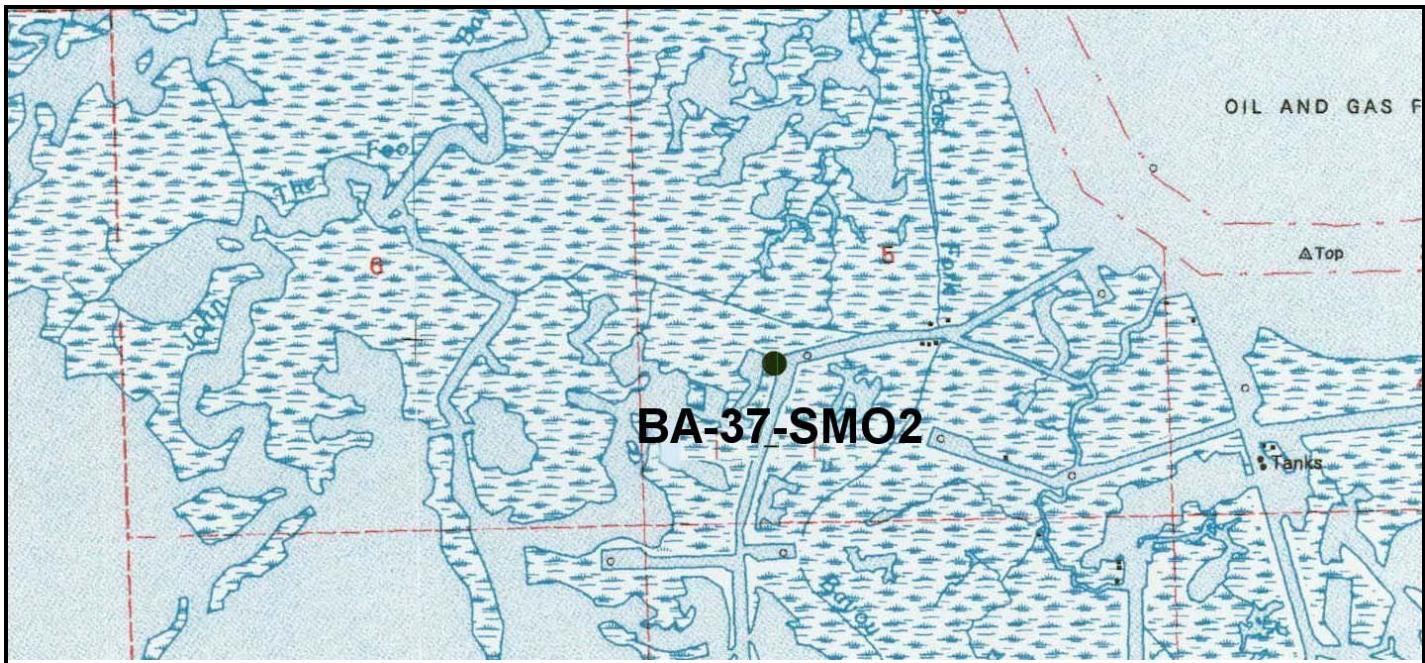
Adjusted NAVD88 Height

Elevation = 2.981 feet (.909 mtrs)

Geoid99 Height = -24.899 mtrs.

Ellipsoid Height = -23.990 mtrs.





VICINITY MAP Scale: 1" = 2000'

Reproduced from USC&GS "Golden Meadow Farms" Quadrangle

Station Name: "SM02"

Location: The monument stamped BA-37-SM02 is located just less than 2 miles south Plum Point which is located within Little Lake in Lafourche Parish, Louisiana. The monument is approximately 13.9 miles southwest of the intersection of Bayou Lafourche and the Gulf Intracoastal Waterway in Larose, Louisiana

Monument Description: NGS style floating sleeve monument; datum point set on 9/16" stainless steel sectional rods driven 104 feet to refusal, set in sand filled 6" PVC pipe with access cover set in concrete, flush with ground.

Stamping: BA-37-SM02

Installation Date: August 15, 2002 **Date of Survey:** August 16 and 17, 2002



Monument Established By: T. Baker Smith & Son, Inc

For: Louisiana Department of Natural Resources, CRD

Adjusted NAD 83 Geodetic Position

Lat. 29°27' 28.30362" N
Long. 90°09' 18.99432" W

Adjusted NAD 83 Datum LSZ (1702) Feet

N= 350,270.145
E= 3,655,746.234

Adjusted NAVD88 Height

Elevation = 3.384 feet (1.031 mtrs)

Geoid99 Height = -24.760 mtrs.
Ellipsoid Height = -23.729 mtrs.



Appendix B

Survey Report and Data (CD-ROM)

Appendix C

Land Surveyor's Certificate

October 17, 2008

Reference: Louisiana Department of Natural Resources
Little Lake Shoreline Protection and Marsh Creation (BA-37)
Spring 2008 Post Construction Monitoring Report
SCI Project No. 131365

To Whom It May Concern:

This is to certify that the report and data provided by Shaw Coastal, Inc. (SCI) to the Louisiana Department of Natural Resources (LDNR) as deliverables for the above referenced project have been reviewed by me and the information represents SCI's best efforts to obtain, analyze and compile available data.

Henry Schwartz, P.L.S.

License Number, Seal,
Signature and Date.

